Mathematics

Primary 4

Test 1



1 Choose the correct answer : (3 marks)

1. Which of the following is a unit fraction ?

   ⓐ $\frac{1}{8}$ ⓑ $\frac{3}{8}$

   ⓒ $\frac{8}{8}$ ⓓ $\frac{8}{1}$

2. $\frac{2}{7} \times 3 =$ ....

   ⓐ $\frac{5}{7}$ ⓑ $\frac{6}{7}$

   ⓒ $\frac{5}{21}$ ⓓ $\frac{6}{21}$

3. Which of the following fractions is less than $\frac{1}{2}$?

   ⓐ $\frac{3}{3}$ ⓑ $\frac{5}{6}$

   ⓒ $\frac{3}{8}$ ⓓ $\frac{6}{12}$

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2 Ahmed has 15 cakes. If $\frac{3}{5}$ of them are covered with chocolate.

How many chocolate cakes are there ? (2 marks)

....

....

Test 2

Total mark
....
5

1 Choose the correct answer : (3 marks)

1 Which of the following shows the identity property of multiplication ?

ⓐ 0×4 ⓑ $\frac{2}{3} \times 1$

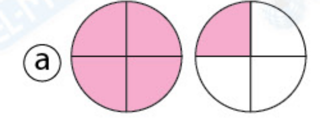
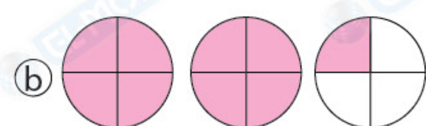
ⓒ $\frac{4}{5} \times \frac{5}{4}$ ⓓ $\frac{5}{7} \times 0$

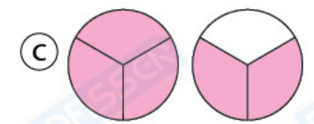
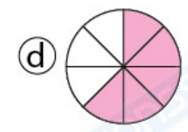
2 Which relation is correct ?

ⓐ $\frac{7}{12} > \frac{7}{9}$ ⓑ $\frac{7}{8} < \frac{7}{10}$

ⓒ $\frac{7}{13} < \frac{7}{11}$ ⓓ $\frac{7}{15} > \frac{7}{9}$

3 The correct model which represents the improper fraction $\frac{5}{4}$ is ....

ⓐ  ⓑ 

ⓒ  ⓓ 

2 Zaher has a number of seeds. On Friday he planted $\frac{3}{9}$ of them, and he planted $\frac{5}{9}$ of them on Saturday. **What fraction represents the seeds that Zaher planted in both of the two days ?** (2 marks)

....

....

Test 3

Total mark
......
5

1 Choose the correct answer : (3 marks)

1. Maha has $\frac{7}{8}$ of a pizza. If her brother Ahmed ate $\frac{5}{8}$ of it, then the share of Maha is ....

   ⓐ $\frac{1}{8}$ ⓑ $\frac{2}{8}$

   ⓒ $\frac{3}{8}$ ⓓ $\frac{5}{8}$

2. What is the equivalent fraction to $\frac{3}{5}$?

$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$					

   ⓐ $\frac{3}{10}$ ⓑ $\frac{4}{10}$

   ⓒ $\frac{5}{10}$ ⓓ $\frac{6}{10}$

3. $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$ ....

   ⓐ $\frac{4}{20}$ ⓑ $\frac{1}{5} \times 4$

   ⓒ $\frac{11}{5}$ ⓓ $1\frac{1}{5}$

2 Write the fraction which represents the colored parts for the bar model and write an addition and multiplication sentence for the fraction. (2 marks)



Fraction : ....

Addition sentence : ....

Multiplication sentence : ....

Test 4

Total mark
......
5

1 Choose the correct answer : (3 marks)

1. $4 + \frac{7}{11} + 2 + \frac{1}{11} =$ ....
   - ⓐ $6\frac{8}{11}$
   - ⓑ $6\frac{8}{22}$
   - ⓒ $2\frac{6}{11}$
   - ⓓ $7\frac{8}{11}$

2. Which choice shows the fractions in an ascending order ?
   - ⓐ $\frac{2}{12}$, $\frac{4}{12}$, $\frac{6}{12}$, $\frac{5}{12}$, $\frac{8}{12}$
   - ⓑ $\frac{2}{12}$, $\frac{4}{12}$, $\frac{5}{12}$, $\frac{6}{12}$, $\frac{8}{12}$
   - ⓒ $\frac{2}{12}$, $\frac{4}{12}$, $\frac{6}{12}$, $\frac{8}{12}$, $\frac{5}{12}$
   - ⓓ $\frac{8}{12}$, $\frac{6}{12}$, $\frac{5}{12}$, $\frac{4}{12}$, $\frac{2}{12}$

3. What is the product of $\frac{3}{5} \times \frac{3}{3}$?
   - ⓐ $\frac{3}{5}$
   - ⓑ $\frac{6}{8}$
   - ⓒ $\frac{3}{15}$
   - ⓓ $\frac{9}{5}$

2 At a birthday party, there were 7 children. If each child ate $\frac{2}{9}$ of a pizza.

How many pizzas were eaten ? (2 marks)

....

....

Test 5

Total mark
5

1 Choose the correct answer : (3 marks)

1 Which of the following shows the fractions ordered from the greatest to the least ?

ⓐ $\frac{6}{12}$, $\frac{5}{6}$, $\frac{3}{10}$
ⓑ $\frac{5}{6}$, $\frac{6}{12}$, $\frac{3}{10}$
ⓒ $\frac{3}{10}$, $\frac{6}{12}$, $\frac{5}{6}$
ⓓ $\frac{6}{12}$, $\frac{3}{10}$, $\frac{5}{6}$

2 Which of the following is an improper fraction ?

ⓐ $2\frac{1}{5}$
ⓑ $\frac{5}{7}$
ⓒ $\frac{1}{4}$
ⓓ $\frac{3}{2}$

3 Which of the following statements is NOT true ?

ⓐ $\frac{5}{15} = \frac{1}{3}$
ⓑ $\frac{1}{6} = \frac{3}{18}$
ⓒ $\frac{7}{8} = \frac{8}{7}$
ⓓ $\frac{3}{3} = \frac{4}{4}$

2 Samira cut a cake into 8 equal parts and ate one part of them.

What is the fraction that represents the remaining parts ? (2 marks)

....

....

Answers of Test 1



1 1 a   2 b   3 c

2 $\frac{3}{5} = \frac{X}{15}$ ($\times 3$), then X = 3 × 3 = 9

So, there are 9 chocolate cakes.

Answers of Test 2



1 1 b   2 c   3 a

2 The fraction = $\frac{3}{9} + \frac{5}{9} = \frac{8}{9}$

Answers of Test 3



1 1 b   2 d   3 b

2 Fraction : $\frac{5}{6}$

Addition sentence : $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$

Multiplication sentence : $5 \times \frac{1}{6}$

Answers of Test 4



1 1 a   2 b   3 a

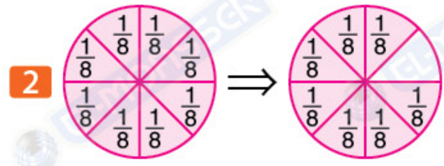
2 Number of pizzas $= \frac{2}{9} \times 7$

$= \frac{2}{9} + \frac{2}{9} + \frac{2}{9} + \frac{2}{9} + \frac{2}{9} + \frac{2}{9} + \frac{2}{9}$

$= \frac{14}{9} = 1\frac{5}{9}$ pizzas.

Answers of Test 5

1 1 b   2 d   3 c

2 

The fraction that represents the remaining parts is $\frac{7}{8}$

Cumulative Assessments on UNIT 9

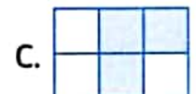
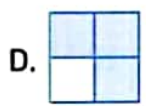
Cumulative Assessment  On lessons (1 to 3) unit 9

1. Choose the correct answer.

a. $\frac{1}{7}+\frac{1}{7}+\frac{1}{7}+\frac{1}{7}=$ ....

A. $\frac{2}{7}$ B. $\frac{3}{7}$ C. $\frac{4}{7}$ D. $\frac{5}{7}$

b. The model which represents $\frac{3}{4}$ is ....

A.  B. C.  D. 

c. Which of the following is not a unit fraction ?

A. $\frac{1}{3}$ B. $\frac{2}{7}$ C. $\frac{1}{5}$ D. $\frac{1}{4}$

d. $1=$ ....

A. $\frac{5}{7}$ B. $\frac{7}{7}$ C. $\frac{1}{2}$ D. $\frac{1}{10}$

---

2. Decompose the following proper fractions in two ways.

	First way	Second way
a.	$\frac{3}{4}=$	$\frac{3}{4}=$ ....
b.	$\frac{4}{5}=$	$\frac{4}{5}=$ ....

---

3. Complete.

a. $\frac{3}{5}=\frac{2}{5}+$ ....

b. $\frac{1}{7}+\frac{1}{7}+\frac{1}{7}=$ ....

c. $\frac{\ldots}{3}=1$

d. Three eighths = ... + ... + ...

e. $\frac{1}{6}+\frac{2}{6}+$ .... $=1$

f. Three quarters = ...

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4. Draw a model that represents one way of decomposing the following fractions.

a. $\frac{2}{3}$

b. $\frac{4}{7}$

Cumulative Assessment 2 Till lesson 4 unit 9

1. Complete.

a. $\frac{5}{3}=$ ______ (as a mixed number)

b. $4\frac{1}{5}=$ ______ (as an improper fraction)

c. $\frac{5}{8}=\frac{1}{8}+\frac{3}{8}+$ ______

d. $\frac{2}{7}+\frac{3}{7}+\frac{1}{7}=$ ______

e. $\frac{\quad}{5}=2$

f. $\frac{9}{\quad}=1$

2. Choose the correct answer.

a. Which of the following is a mixed number? ______

A. $\frac{3}{5}$ B. $\frac{4}{3}$ C. $3\frac{1}{2}$ D. $\frac{1}{4}$

b. $7\frac{1}{5}=$ ______

A. $\frac{36}{5}$ B. $\frac{35}{3}$ C. $\frac{13}{5}$ D. $\frac{35}{7}$

c. $\frac{2}{3}$ is ______

A. a unit fraction B. a mixed number
C. an improper fraction D. a proper fraction

d. Which of the following has the same value as $\frac{5}{7}$? ______

A. $\frac{1}{7}+\frac{1}{7}+\frac{1}{7}+\frac{1}{7}$

B. $\frac{1}{5}+\frac{1}{5}+\frac{1}{5}+\frac{1}{5}+\frac{1}{5}+\frac{1}{5}+\frac{1}{5}$

C. $\frac{1}{7}+\frac{1}{7}+\frac{1}{7}+\frac{1}{7}+\frac{1}{7}$

D. $\frac{1}{7}+\frac{2}{7}+\frac{3}{7}+\frac{4}{7}+\frac{5}{7}$

e. $\frac{6}{\quad}=2$

A. 1 B. 2 C. 3 D. 4

f. $\frac{5}{2}$ is ______

A. a unit fraction B. a mixed number
C. an improper fraction D. a proper fraction

3. Write the opposite fraction in the form of an improper fraction and a mixed number.




Improper fraction: ______

Mixed number: ______

4. Write each mixed number as an improper fraction.

a. $5\frac{7}{8}$ b. $3\frac{2}{7}$ c. $2\frac{5}{9}$

5. Write each improper fraction as a mixed number.

a. $\frac{7}{3}$ b. $\frac{18}{5}$ c. $\frac{27}{4}$

Cumulative Assessment  Till lessons (5 to 7) unit 9

1. Complete.

a. $7\frac{5}{7} - \text{......} = 3\frac{1}{7}$

b. $\text{......} - 4\frac{1}{3} = 3\frac{2}{3}$

c. $8\frac{5}{6} + \text{......} = 9$

d. $1 = \frac{\text{...}}{7}$

e. $\frac{8}{\text{...}} = 2$

f. $4\frac{2}{3} = \frac{\text{...}}{3}$

2. Choose the correct answer.

a. $3 + \frac{2}{5} + 1 + \frac{1}{5} = \text{......}$

A. $2\frac{3}{5}$ B. $4\frac{3}{5}$ C. $2\frac{1}{5}$ D. $\frac{7}{5}$

b. $7\frac{4}{7} - 3\frac{3}{7} = \text{......}$

A. $10\frac{1}{7}$ B. $4\frac{7}{7}$ C. $4\frac{1}{7}$ D. 4

c. Which one of the following statements is true ?

A. $\frac{3}{7} + \frac{1}{7} = \frac{4}{14}$

B. $2\frac{1}{5} + 1\frac{2}{5} = 3\frac{3}{5}$

C. $3\frac{1}{2} = \frac{6}{2}$

D. $3\frac{2}{4} - 1\frac{1}{4} = 2\frac{3}{4}$

d. Which of the following is an improper fraction ?

A. $\frac{3}{7}$ B. $\frac{1}{4}$ C. $2\frac{1}{5}$ D. $\frac{7}{3}$

e. $\frac{3}{7} + \text{......} + \frac{1}{7} = \frac{5}{7}$

A. $\frac{1}{7}$ B. $\frac{2}{7}$ C. $\frac{3}{7}$ D. $\frac{4}{7}$

3. Solve each of the following. You may draw models to help.

a. $4\frac{2}{5} + 3\frac{3}{5} = \text{......}$

b. $4\frac{4}{7} - 2\frac{2}{7} = \text{......}$

c. $4 - 2\frac{1}{4} = \text{......}$

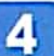
d. $1 + 2 + \frac{3}{8} + \frac{4}{8} + \frac{3}{8} = \text{......}$

e. $1 - \frac{2}{9} - \frac{4}{9} = \text{......}$

f. $\frac{4}{5} + 2\frac{1}{5} = \text{......}$

4. Petra has $5\frac{3}{4}$ cakes , she gave $3\frac{1}{4}$ to her brother. How many cakes left does she has ?

......

Cumulative Assessment  Till lesson 8 unit 9

1. Choose the correct answer.

a. Which of the following fractions is the greatest ?

A. $\frac{2}{5}$ B. $\frac{2}{7}$ C. $\frac{2}{3}$ D. $\frac{2}{9}$

b. $\frac{3}{8} >$ ....

A. $\frac{5}{8}$ B. $\frac{3}{7}$ C. $\frac{3}{9}$ D. $\frac{7}{8}$

c. $3\frac{1}{4} =$ .... (as an improper fraction)

A. $\frac{13}{3}$ B. $\frac{13}{4}$ C. $\frac{12}{4}$ D. $\frac{8}{4}$

d. .... $< \frac{5}{9}$

A. $\frac{5}{8}$ B. $\frac{5}{7}$ C. $\frac{6}{9}$ D. $\frac{5}{10}$

e. $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$ ....

A. $\frac{3}{5}$ B. $\frac{3}{15}$ C. $\frac{1}{15}$ D. $\frac{3}{25}$

2. Complete.

a. .... $- 3\frac{1}{3} = 1\frac{1}{3}$

b. $4\frac{4}{5} -$ .... $= 1\frac{1}{5}$

c. $3\frac{2}{5} +$ .... $= 4\frac{3}{5}$

d. .... $+ 1\frac{1}{7} = 2$

e. $\frac{\square}{7} = 1$

f. $\frac{\square}{3} = 5$

g. $\frac{4}{5} = \frac{3}{5} +$ ....

h. $\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} =$ ....

i. Two fifths = ...

j. $\frac{9}{5} =$ .... (as a mixed number)

3. Solve the problems.

a. $2\frac{3}{5} + 1\frac{4}{5} =$ ....

b. $6\frac{4}{7} - 3\frac{3}{7} =$ ....

c. $\frac{3}{9} + \frac{6}{9} =$ ....

d. $3 - 1\frac{5}{8} =$ ....

4. a. Order the following fractions in an ascending order.

$\frac{7}{10}$, $\frac{3}{10}$, $\frac{1}{10}$, $\frac{9}{10}$, $\frac{6}{10}$

b. Order the following fractions in a descending order.

$\frac{11}{7}$, $\frac{11}{3}$, $\frac{11}{5}$, $\frac{11}{8}$, $\frac{11}{4}$

Cumulative Assessment 5 — Till lesson 9 unit 9

1. Choose the correct answer.

a. Which of the following is a unit fraction ?

A. $\frac{3}{7}$ B. $\frac{2}{5}$ C. $\frac{3}{8}$ D. $\frac{1}{10}$

b. $\frac{3}{___} = 1$

A. 1 B. 2 C. 3 D. 10

c. $\frac{19}{4} =$ .... (as a mixed number)

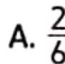
A. $4\frac{3}{4}$ B. $4\frac{1}{4}$ C. $5\frac{1}{4}$ D. $3\frac{3}{4}$

d. $3 + \frac{2}{7} + 5 + \frac{2}{7} =$ ....

A. $8\frac{2}{7}$ B. $8\frac{2}{14}$ C. $8\frac{4}{7}$ D. $8\frac{5}{7}$

e. What is the equivalent fraction to $\frac{1}{3}$?



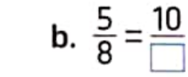


A. $\frac{2}{6}$ B. $\frac{4}{6}$

C. $\frac{2}{8}$ D. $\frac{3}{9}$

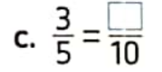
2. Write the missing numerator or denominator.

a. $\frac{2}{3} = \frac{\square}{6}$

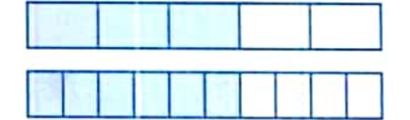


b. $\frac{5}{8} = \frac{10}{\square}$





c. $\frac{3}{5} = \frac{\square}{10}$



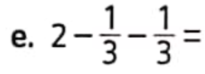
3. Complete.

a. $\frac{3}{4} = \frac{1}{4} + \frac{1}{4} +$ ....

b. $1 - \frac{3}{7} =$ ....

c. $2\frac{3}{5} =$ .... (as an improper fraction)

d. $\frac{14}{___} = 7$



e. $2 - \frac{1}{3} - \frac{1}{3} =$ ....

f. Three tenths $= \frac{2}{10} +$ ....

g. $\frac{7}{7} = \frac{5}{___}$

h. The numerator of a proper fraction is .... than its denominator.

4. Sara ate $1\frac{1}{3}$ of a chocolate cake and her brother Adel ate $\frac{4}{3}$ of a cake of the same size. Draw and color a model for each one of them. then show who ate more cake Sara or Adel ?

Cumulative Assessment  6 Till lessons (10&11) unit 9

1. Choose the correct answer.

a. $1\frac{4}{7} + 5\frac{2}{7} =$ ....

A. $6\frac{6}{14}$ B. $6\frac{8}{7}$ C. $6\frac{6}{7}$ D. $7\frac{6}{7}$

b. $\frac{13}{7}$ ◯ $\frac{13}{5}$

A. > B. < C. =

c. $\frac{6}{11}$ ◯ $\frac{4}{11}$

A. > B. < C. =

d. Which of the following is an improper fraction?

A. $\frac{1}{5}$ B. $\frac{11}{2}$ C. $5\frac{1}{2}$ D. $\frac{3}{5}$

e. $\frac{3}{4} =$ ....

A. $\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}$ B. $\frac{1}{3}+\frac{1}{3}+\frac{1}{3}$ C. $\frac{1}{4}+\frac{1}{4}+\frac{1}{4}$ D. $\frac{3}{4}+\frac{3}{4}+\frac{3}{4}$

f. Which of the following fractions is closest to 1?

A. $\frac{1}{7}$ B. $\frac{2}{11}$ C. $\frac{4}{10}$ D. $\frac{10}{11}$

g. Which of the following fractions is less than $\frac{1}{2}$?

A. $\frac{3}{3}$ B. $\frac{5}{6}$ C. $\frac{3}{8}$ D. $\frac{6}{12}$

2. Find the result of each of the following.

a. $2 + \frac{2}{9} + 4 + \frac{5}{9} =$ ....

b. $7\frac{3}{5} - 5\frac{1}{5} =$ ....

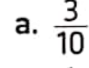
c. $2 - \frac{1}{4} - \frac{1}{4} =$ ....

d. $5 - 2\frac{3}{4} =$ ....

e. $7\frac{2}{7} + \frac{4}{7} =$ ....

f. $\frac{3}{7} + \frac{1}{7} + \frac{1}{7} =$ ....

3. Write weather the fraction is closest to 0 , $\frac{1}{2}$ or 1 (use the number line.)





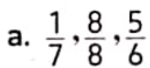
a. $\frac{3}{10}$

b. $\frac{9}{10}$

c. $\frac{1}{10}$

d. $\frac{6}{10}$

4. Use benchmark fractions 0 , $\frac{1}{2}$ and 1 to order each group of fractions.



a. $\frac{1}{7}, \frac{8}{8}, \frac{5}{6}$ (from the least to the greatest)

b. $\frac{5}{6}, \frac{1}{9}, \frac{7}{7}, \frac{5}{10}$ (from the greatest to the least)

Cumulative Assessment  Till lessons (12 to 14) unit 9

1. Choose the correct answer.

a. $\frac{5}{7} <$ ....

A. 1 B. $\frac{3}{7}$ C. $\frac{1}{2}$ D. $\frac{1}{9}$

b. $\frac{3}{9} + \frac{1}{9} + 2 =$ ....

A. $2\frac{4}{9}$ B. $2\frac{4}{18}$ C. $\frac{6}{9}$ D. $2\frac{3}{9}$

c. $5\frac{1}{4} =$ ....

A. $\frac{20}{4}$ B. $\frac{22}{4}$ C. $\frac{21}{4}$ D. $\frac{19}{4}$

d. $5 - 2\frac{1}{5} =$ ....

A. $2\frac{1}{5}$ B. $3\frac{1}{5}$ C. $2\frac{4}{5}$ D. $2\frac{3}{5}$

e. $\frac{3}{7}$ is equivalent to ....

A. $\frac{6}{21}$ B. $\frac{9}{14}$ C. $\frac{9}{21}$ D. $\frac{9}{28}$

2. Write three equivalent fractions to each fraction.

a. $\frac{2}{3} =$ .... = ... = ...

b. $\frac{5}{10} =$ .... = ... = ...

c. $\frac{6}{18} =$ .... = ... = ...

d. $\frac{4}{7} =$ .... = ... = ...

e. $\frac{1}{5} =$ .... = ... = ...

f. $\frac{12}{20} =$ .... = ... = ...

3. Complete.

a. $\frac{43}{5} =$ .... (as a mixed number)

b. $7\frac{2}{5} - 1\frac{1}{5} =$ ....

c. $\frac{5}{9} = \frac{\dots}{27}$

d. If $\frac{4}{4} = \frac{5}{x}$, then $x =$ ....

e. $\frac{8}{10} = \frac{4}{\dots}$

f. $\frac{6}{7} \times \frac{3}{3} =$ ....

4. Use the benchmark fractions $0, \frac{1}{2}, 1$ to order the following fractions from least to greatest.

$\frac{3}{8}, \frac{7}{9}, \frac{5}{10}$

5. Ahmed has 12 cakes. $\frac{3}{4}$ of them are choclete.
How many choclate cake are there ?

Cumulative Assessment 8 Till lesson 15 unit 9

1. Complete.

a. $3\frac{1}{8} + ____ = 7\frac{5}{8}$

b. $3\frac{2}{5} = ____$ (as an improper fraction)

c. $7 \times \frac{1}{9} = ____$

d. $\frac{7}{8} = \frac{21}{__}$

e. $\frac{2}{7} = \frac{__}{__} = \frac{__}{__} = \frac{__}{__}$

f. $\frac{2}{7} \times 3 = ____$

2. Choose the correct answer.

a. $7 \times \frac{1}{4} = ____$

A. $\frac{7}{4}$ B. $\frac{7}{28}$ C. $\frac{1}{28}$ D. $7\frac{1}{4}$

b. $\frac{3}{11}$ ◯ $\frac{3}{7}$

A. > B. < C. =

c. $\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = ____$

A. $\frac{5}{3}$ B. $\frac{1}{3} \times 4$ C. $\frac{4}{12}$ D. $\frac{1}{12}$

d. $1 + \frac{2}{7} + \frac{1}{7} + 3 = ____$

A. $\frac{7}{7}$ B. $\frac{6}{7}$ C. $7\frac{3}{7}$ D. $4\frac{3}{7}$

3. Use models to solve the following problems.

a. $1 - \frac{2}{8} = ____$

b. $2 - \frac{2}{3} = ____$

4. Draw a model for each of the following improper fractions. Then write each improper fraction as a mixed number.

a. $\frac{7}{3}$

b. $\frac{3}{2}$

5. Write the multiplication sentence for each of the following.

a. $\frac{1}{4} + \frac{1}{4} = ____$

b. $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} = ____$

c. $\frac{1}{9} + \frac{1}{9} + \frac{1}{9} = ____$

d. $\frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} = ____$

6. How many $\frac{1}{7}$ long wooden pegs can be cut from a plank that is $\frac{6}{7}$ m long?

____



Mathematics

الصف 4 الابتدائى

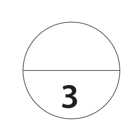
مقترح النماذج الاسترشادية لشهر مارس

العام الدراسى 2022 - 2023



Model (1)

1 Choose the correct answer:



a) The number of quarters in 3 is ....

- 7
- 10
- 12
- 16

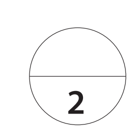
b) $3 + \frac{1}{4} + \frac{1}{4} =$ ....

- $3\frac{3}{4}$
- $3\frac{1}{3}$
- $3\frac{2}{4}$
- 4

c) There are 45 students in a class and $\frac{2}{5}$ of them are boys, then the number of girls in this class is ....

- 9
- 27
- 36
- 18

2 Answer the following:



Write the fraction which represents the colored part in the following model, then decompose it in 2 ways:





....

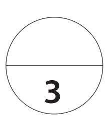
....

....

5 Marks

Model (2)

1 Choose the correct answer:



a $5\frac{6}{9} - 1\frac{4}{9} =$ ....

- $3\frac{4}{9}$
- $7\frac{1}{9}$
- $4\frac{3}{9}$
- $4\frac{2}{9}$

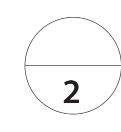
b $2 - \frac{3}{8}$ .... $1\frac{1}{8} + \frac{2}{8}$

- $>$
- $<$
- $=$
- otherwise

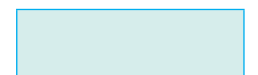
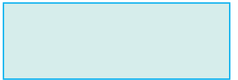
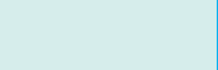
c $\frac{7}{8}$ is closed to ....

- 0
- $\frac{1}{2}$
- $\frac{1}{4}$
- 1

2 Answer the following:



a Find the result of $3 - \frac{2}{5}$ using models:

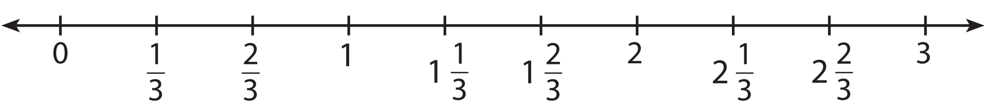




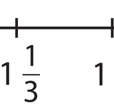
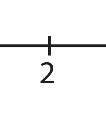
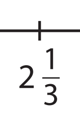
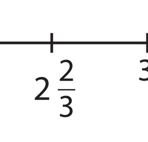
= ....

b Find the sum of each of the following using the number line:

$1\frac{2}{3} + \frac{2}{3}$ ....





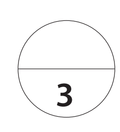







Model (3)

5 Marks

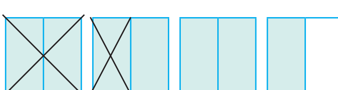
1 Choose the correct answer:



a $6\frac{3}{4} - 1\frac{1}{4}$ .... $5\frac{1}{4} + \frac{1}{4}$

- <
- >
- =
- otherwise

b The equation which represents the opposite model is ....

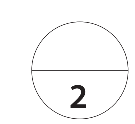


- $3\frac{1}{4} - 1\frac{1}{4} = 2$
- $3\frac{1}{2} - 1\frac{1}{2} = 2$
- $2\frac{3}{4} - 1\frac{1}{2} = 1\frac{1}{4}$
- $3 - 1\frac{1}{2} = 1\frac{1}{2}$

c $2\frac{4}{5} + 1\frac{1}{5} =$ ....

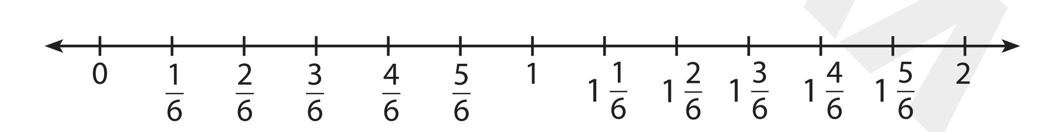
- 3
- 4
- $3\frac{1}{5}$
- 5

2 Answer the following:

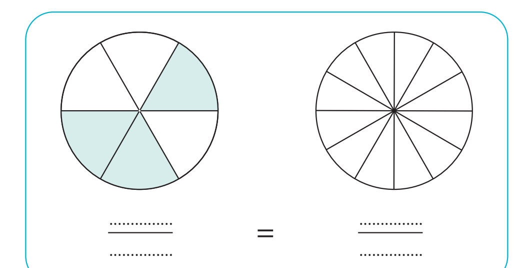


a Find the result using the number line or drawing models:

$2 - \frac{4}{6} =$ ....



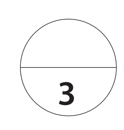
b Write the fraction which represents the colored part in the first model, then color the second model to get an equivalent fraction to the first one:





Model (1)

1 Choose the correct answer:



a The number of quarters in 3 is ....

- 7
- 10
- 12
- 16

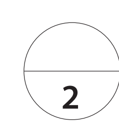
b $3 + \frac{1}{4} + \frac{1}{4} =$ ....

- $3\frac{3}{4}$
- $3\frac{1}{3}$
- $3\frac{2}{4}$
- 4

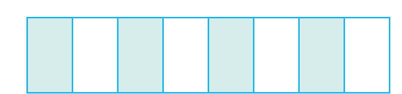
c There are 45 students in a class and $\frac{2}{5}$ of them are boys, then the number of girls in this class is ....

- 9
- 27
- 36
- 18

2 Answer the following:



Write the fraction which represents the colored part in the following model, then decompose it in 2 ways:

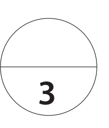
first method: $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \frac{4}{8}$

second method: $\frac{2}{8} + \frac{2}{8} = \frac{4}{8}$

5 Marks

Model (2)

1 Choose the correct answer:



a $5\frac{6}{9} - 1\frac{4}{9} =$ ....

- $3\frac{4}{9}$
- $7\frac{1}{9}$
- $4\frac{3}{9}$
- $4\frac{2}{9}$

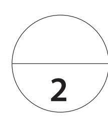
b $2 - \frac{3}{8}$ .... $1\frac{1}{8} + \frac{2}{8}$

- $>$
- $<$
- $=$
- otherwise

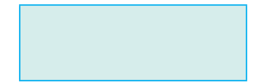
c $\frac{7}{8}$ is closed to ....

- 0
- $\frac{1}{2}$
- $\frac{1}{4}$
- 1

2 Answer the following:



a Find the result of $3 - \frac{2}{5}$ using models:

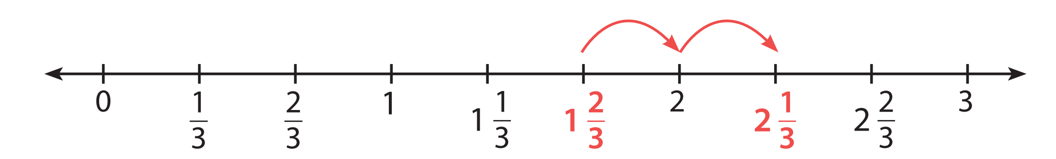



× ×

$= 2\frac{3}{5}$

b Find the sum of each of the following using the number line:

$1\frac{2}{3} + \frac{2}{3}$ $\quad 1\frac{2}{3} + \frac{2}{3} = 2\frac{1}{3}$

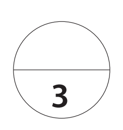




Model (3)

5 Marks

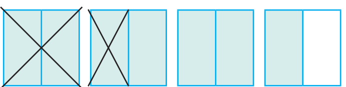
1 Choose the correct answer:



a) $6\frac{3}{4} - 1\frac{1}{4}$ .... $5\frac{1}{4} + \frac{1}{4}$

- <
- >
- =
- otherwise

b) The equation which represents the opposite model is ....

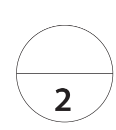


- $3\frac{1}{4} - 1\frac{1}{4} = 2$
- $3\frac{1}{2} - 1\frac{1}{2} = 2$
- $2\frac{3}{4} - 1\frac{1}{2} = 1\frac{1}{4}$
- $3 - 1\frac{1}{2} = 1\frac{1}{2}$

c) $2\frac{4}{5} + 1\frac{1}{5} =$ ....

- 3
- 4
- $3\frac{1}{5}$
- 5

2 Answer the following:

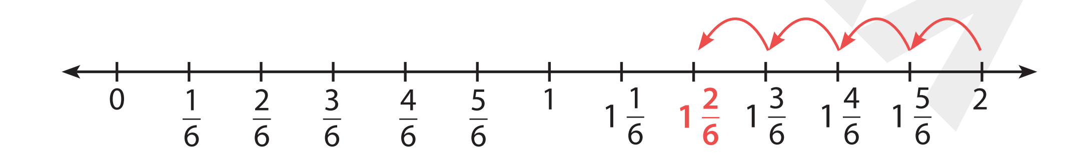


a) Find the result using the number line or drawing models:

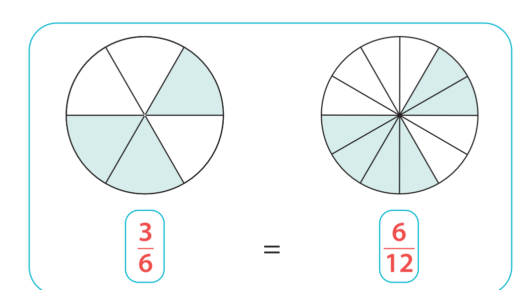
$2 - \frac{4}{6} = 1\frac{2}{6}$







b) Write the fraction which represents the colored part in the first model, then color the second model to get an equivalent fraction to the first one:

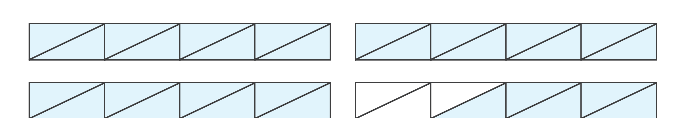


General Practice on Unit 9



1 Choose the correct answer:

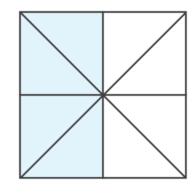
a The mixed number which represents the opposite model is ....



1. $3\frac{1}{2}$
2. $3\frac{3}{4}$
3. $\frac{29}{8}$
4. $3\frac{5}{8}$

b The fraction which represents the colored part in the following model is

....



1. $\frac{1}{8}$
2. $\frac{1}{4}$
3. $\frac{1}{2}$
4. $\frac{1}{6}$

c Soha rode her bike for one fifth of a kilometer on Monday and two fifths of a kilometer on Tuesday. **How many kilometers did she ride altogether?**

1. $\frac{1}{5}$ km
2. $\frac{3}{5}$ km
3. $\frac{2}{5}$ km
4. 3 km

d Hanaa has $\frac{3}{4}$ pound and her brother has $\frac{1}{2}$ pound,

what's the difference between what they have?

1. $\frac{1}{2}$ pound
2. $\frac{1}{8}$ pound
3. $\frac{1}{4}$ pound
4. $\frac{1}{3}$ pound

e A recipe needs $\frac{3}{4}$ teaspoon of black pepper and $\frac{1}{4}$ teaspoon of red pepper.

How much more black pepper is there than red pepper in this recipe?

1. $\frac{1}{2}$
2. 1
3. $\frac{1}{4}$
4. $\frac{3}{4}$

f) Sally took $2\frac{2}{3}$ hours to answer the test and Hany took $2\frac{1}{6}$ hours to answer the same test, while Suaad took $2\frac{1}{3}$ hours to answer the same test.

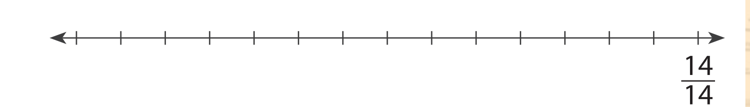
Who took more time to finish this test?

1. Sally.
2. Hany.
3. Suaad.
4. They took the same time.

2 Place 0 , $\frac{1}{2}$ and 1 on the opposite number line, then use them to complete each of the following:

a $\frac{13}{14}$ is closed to ....

b $\frac{6}{14}$ is closed to ....



c $\frac{2}{14}$ is closed to ....

3 Complete each of the following:

a $\frac{1}{8} = \frac{3}{\dots}$

b $\frac{5}{7} = \frac{\dots}{49}$

c $\frac{2}{8} = \frac{\dots}{4}$

d $\frac{11}{55} = \frac{\dots}{5}$

e $\frac{1}{10} = \frac{\dots}{30}$

f $\frac{45}{60} = \frac{\dots}{4}$

4 Put a suitable sign (> , < or =):

a $\frac{1}{2}$ ☐ $\frac{5}{8}$

b $\frac{2}{3}$ ☐ $\frac{1}{5}$

c $\frac{1}{10}$ ☐ $\frac{7}{8}$

d $\frac{2}{12}$ ☐ $\frac{8}{9}$

2 Arrange each of the following fractions as required using $\frac{1}{2}$ as a benchmark fraction:

a $\frac{7}{7}$, $\frac{2}{8}$, $\frac{4}{9}$

✧ Ascending order: ....

b $\frac{3}{3}$, $\frac{2}{12}$, $\frac{4}{8}$

✧ Descending order: ....

c $\frac{1}{4}$, $\frac{3}{6}$, $\frac{8}{8}$

✧ Ascending order: ....

d $\frac{2}{5}$, $\frac{3}{4}$, $\frac{5}{10}$

✧ Descending order: ....

Unit 9 Concept

Fractions

9.1 | Composing and Decomposing Fractions

Exercises on Lessons 1 - 3

Let's Build it!, Break It Down & Break It Down Again

1 Complete the following table:

	Model	Number of Equal Parts	Word Form of the Shaded Part	Fraction Form
a		....	....	..../....
b		....	....	..../....
c		....	....	..../....
d		....	....	..../....
e		....	....	..../....
f		....	....	..../....

2 Write the fraction of the shaded parts in fraction and word forms:

a ..../.... ....

b ..../.... ....

c ..../.... ....

d ..../.... ....

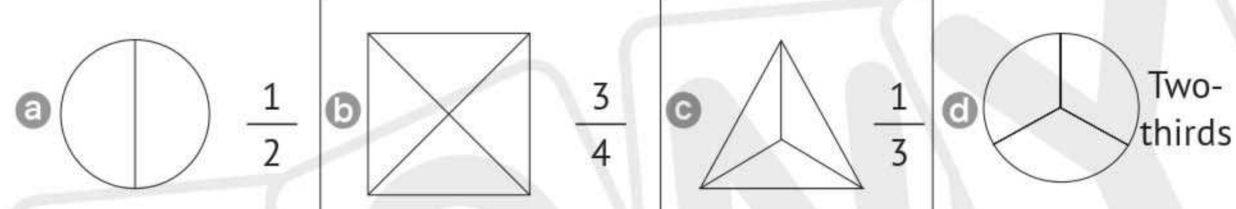
e ..../.... ....

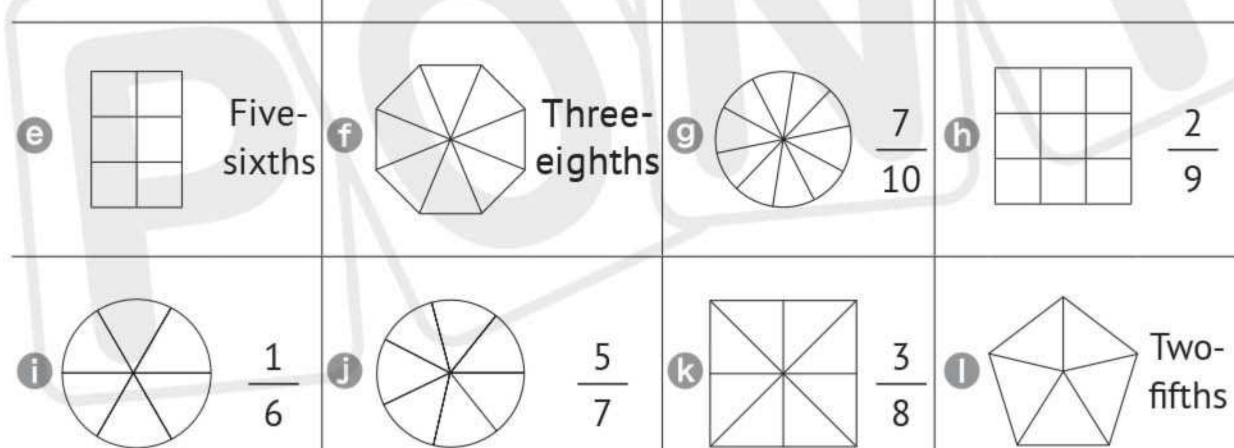
f ..../.... ....

g ..../.... ....

h ..../.... ....

3 Color the part representing the fraction shown:



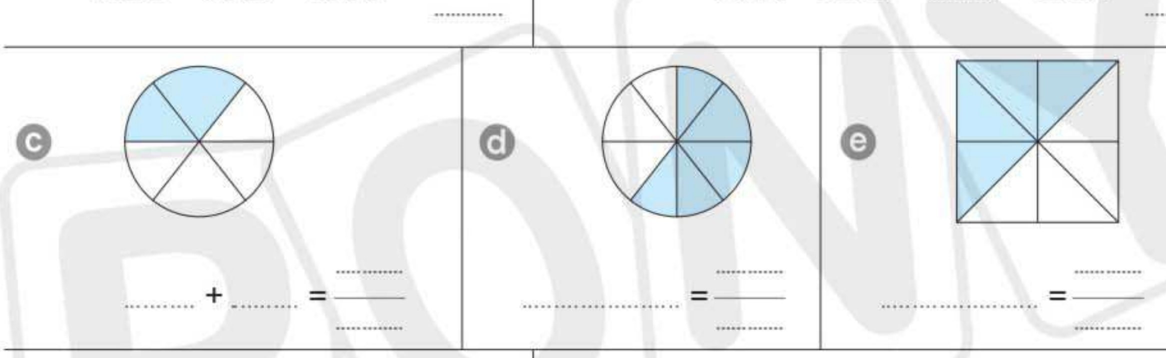


4 Write an equation using unit fractions to show how to compose the fraction representing the following models:



a .... + ... + ... = $\frac{.........}{.........}$

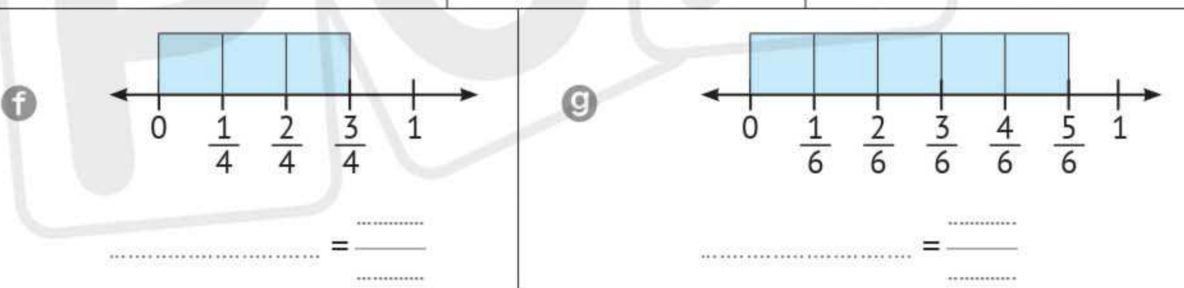
b .... + ... + ... + ... = $\frac{.........}{.........}$



c .... + ... = $\frac{.........}{.........}$

d .... = $\frac{.........}{.........}$

e .... = $\frac{.........}{.........}$



f .... = $\frac{.........}{.........}$

g .... = $\frac{.........}{.........}$

5 Complete:

a) $\frac{1}{3} + \frac{1}{3} =$ ....

b) $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$ ....

c) $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$ ....

d) $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} =$ ....

e) $\frac{1}{2} + \frac{1}{2} =$ ....

f) $\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} =$ ....

g) $\frac{4}{5} = \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots}$

h) $\frac{4}{7} = \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots}$

i) $\frac{3}{8} = \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots}$

j) $\frac{5}{9} = \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots}$

k) $\frac{2}{6} = \frac{\dots}{\dots} + \frac{\dots}{\dots}$

l) $\frac{3}{5} = \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots}$

m) $\frac{5}{5} =$ ....

n) $\frac{3}{3} =$ ....

o) $\frac{7}{7} =$ ....

p) $\frac{8}{\dots} = 1$

q) $\frac{\dots}{6} = 1$

r) $\frac{9}{\dots} = 1$

s) Five-.................. = 1

t) ....-eighths = 1

u) Three-thirds = ...

6 Decompose the following fractions using unit fractions:

a) $\frac{2}{3} =$ ....

b) $\frac{3}{4} =$ ....

c) $\frac{2}{4} =$ ....

d) $\frac{4}{5} =$ ....

e) $\frac{3}{5} =$ ....

f) $\frac{5}{6} =$ ....

g) $\frac{4}{7} =$ ....

h) $1 = \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots}$

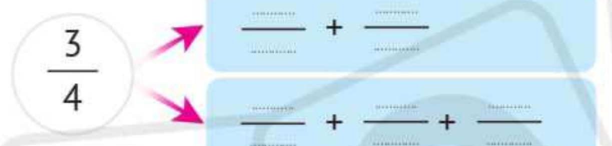
i) $1 = \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots}$

j) $1 = \frac{\dots}{\dots} + \frac{\dots}{\dots}$

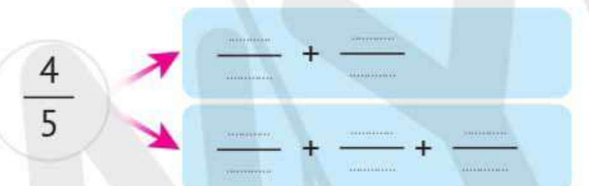
k) $1 = \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots}$

7 Decompose the following fractions in two different ways:

a $\frac{3}{4}$

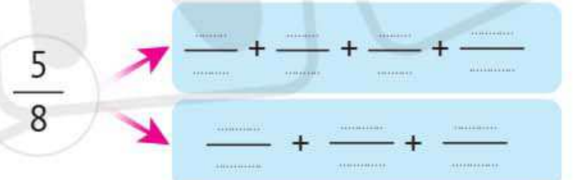


b $\frac{4}{5}$

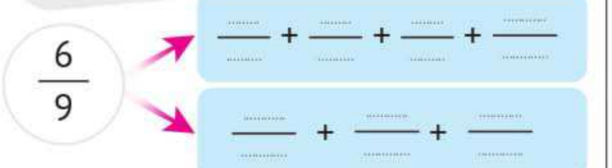


c $\frac{5}{7}$

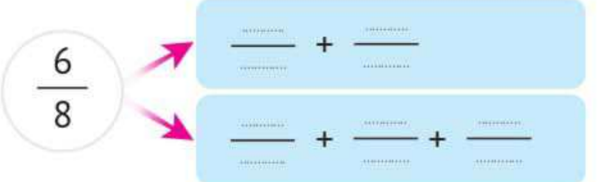
d $\frac{5}{8}$



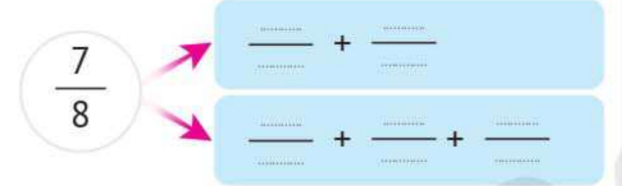
e $\frac{6}{9}$



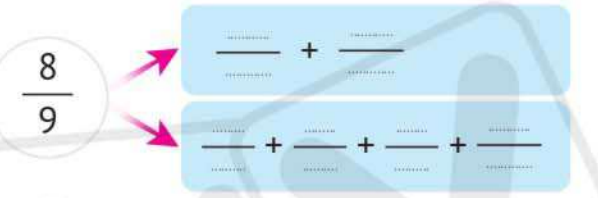
f $\frac{6}{8}$



g $\frac{7}{8}$



h $\frac{8}{9}$



8 Choose the correct answer:

a) Five-sevenths = ... ($\frac{5}{7}$ or $\frac{7}{5}$ or $\frac{5}{12}$ or 35)

b) Three-fifths = ... (15 or $\frac{5}{3}$ or $\frac{3}{8}$ or $\frac{3}{5}$)

c) $\frac{4}{9}$ = ... (4 fifths or 4 ninths or 9 fourths or 9 fifths)

d) ....-sixths = $\frac{4}{6}$ (Six or Four or Nine or Ten)

e) Seven-.................... = $\frac{7}{9}$ (sevenths or halves or ninths or eighths)

f .... $= \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$ $(\frac{3}{15}$ or $\frac{3}{5}$ or $\frac{1}{15}$ or $\frac{1}{5})$

g .... $= \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$ $(\frac{4}{8}$ or $\frac{4}{2}$ or $\frac{1}{8}$ or $\frac{1}{2})$

h .... $= \frac{3}{5} + \frac{3}{5}$ $(\frac{6}{10}$ or $\frac{3}{10}$ or $\frac{6}{5}$ or $\frac{3}{5})$

i .... $= \frac{1}{7} + \frac{3}{7}$ $(\frac{4}{7}$ or $\frac{2}{7}$ or $\frac{4}{14}$ or $\frac{2}{14})$

j .... $+ \frac{3}{8} = \frac{5}{8}$ $(\frac{8}{8}$ or $\frac{2}{5}$ or $\frac{3}{5}$ or $\frac{2}{8})$

k $\frac{2}{10} + \frac{2}{10} +$ .... $= \frac{9}{10}$ $(\frac{4}{10}$ or $\frac{5}{5}$ or $\frac{4}{20}$ or $\frac{5}{10})$

l $\frac{\dots}{\dots} = 1$ $(\frac{1}{4}$ or $\frac{4}{1}$ or $\frac{4}{4}$ or $4)$

m Five-fifths = ... $(1$ or $\frac{5}{10}$ or $\frac{1}{5}$ or $5 \times 5)$

9 Read the following problems, then draw a model and write an equation using unit fractions to show your answer:

a Hossam wants to fill a $\frac{5}{6}$ liter juice bottle using a cup that holds $\frac{1}{6}$ liter of juice, how many times will Hossam need to fill the cup to fill the bottle?

....

....

b Samah has a pizza divided into 8 equal pieces. She ate part of it and 2 pieces were remaining. How many pieces did Samah eat?

....

....

c Toka's mother prepared a cake to celebrate her daughter's birthday. She divided this cake into 9 equal pieces. Toka's friends ate 5 pieces. How many pieces of cake are left?

....

....

ⓓ Maysa bought 4 pizza pies, and divided each pie into 8 equal slices. After Maysa's guests finished eating, there was only one piece left from each pie. How many pieces are left of all the pies?

....

....

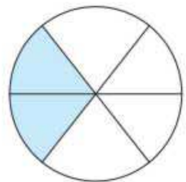
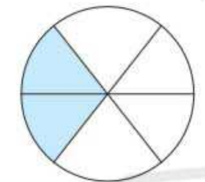
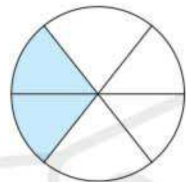
10 Answer the following:

ⓐ Omar ate $\frac{1}{5}$ of a bag of popcorn, and he and his brother Amir shared what was left in the bag. Write equations showing two methods they can use to divide the remaining popcorn.

....

....

ⓑ Write the fraction represented by the following models, then compose a fraction and decompose it another way.

Fraction = $\frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} = \frac{\dots}{\dots}$

Decomposing the fraction in another way = $\frac{\dots}{\dots}$ = ...

11 Omar bought a pizza pie and divided it into 8 equal parts. Omar ate $\frac{1}{8}$ of the pizza and shared the rest with his brother. Write two equations showing two ways that can be used to divide the remaining pizza pieces.

The fraction representing the remainder: ....

First equation: ....

Second equation: ....

Assessment on Lessons 1-3

1 Choose the correct answer:

a) Three-ninths = ... ($\frac{3}{9}$ or $\frac{9}{3}$ or $\frac{3}{6}$ or 27)

b) ....-eighths = $\frac{3}{8}$ (Eight or Three or Five or Eleven)

c) $\frac{3}{3}$ = ... (Third or Two-thirds or Sixth or One whole)

d) .... = $\frac{1}{3} + \frac{1}{3} + \frac{1}{3}$ ($\frac{3}{9}$ or $\frac{1}{9}$ or $\frac{3}{3}$ or $\frac{1}{27}$)

e) $\frac{3}{4}$ = ... ($\frac{3}{2} + \frac{3}{2}$ or $\frac{1}{4} + \frac{1}{4}$ or $\frac{2}{3} + \frac{1}{1}$ or $\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$)

2 Complete the following:

a) $\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \frac{\dots}{\dots}$ b) Seven-ninths = $\frac{\dots}{\dots}$

c) Five-fifths = $\frac{\dots}{\dots}$ = ...

d) $\frac{5}{7}$ = ... (Word Form)

e) $\frac{6}{9}$ = ... + ... + ... + ... + ... + ...

3 Answer the following:

There are two identical chocolates, each divided into 4 equal pieces; Hossam ate 3 of the first, and Tamer ate 2 of the second. How many pieces do they have left? Draw a model for your solution, and write an equation using unit fractions.

....

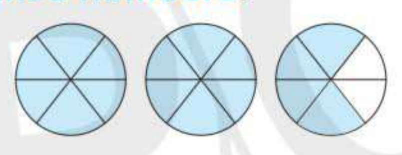
....

Exercises on Lesson 4

All Mixed Up

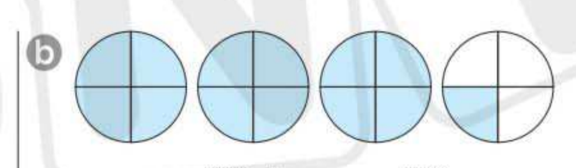
1 Write each of the following fractions as improper fractions and mixed numbers:

a



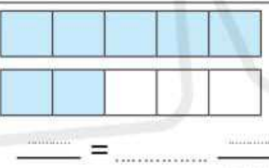
$\frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$

b



$\frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$

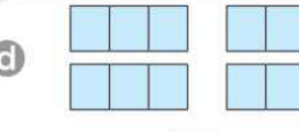
c

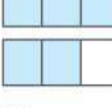


$\frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$

d

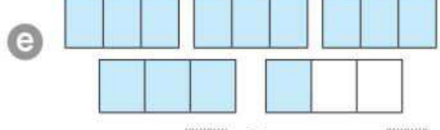






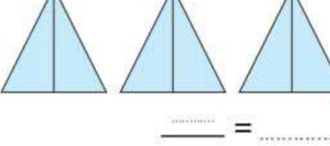
$\frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$

e



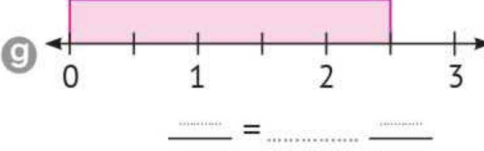
$\frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$

f



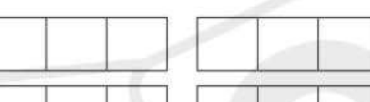
$\frac{\dots}{\dots} = \dots$

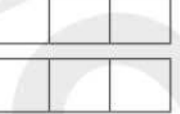
g



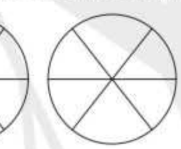
$\frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$

h









$\frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$

2 Using the following models, complete each of the following:

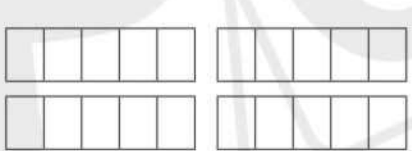
a

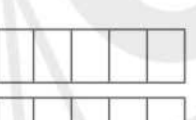
$\frac{11}{3} = \dots \frac{\dots}{\dots}$

b

$2\frac{4}{6} = \frac{\dots}{\dots}$

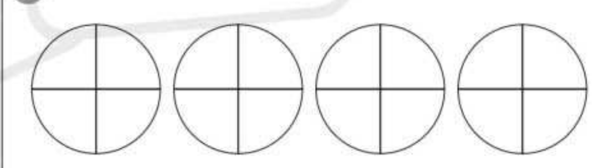
c





$\frac{17}{5} = \dots \frac{\dots}{\dots}$

d

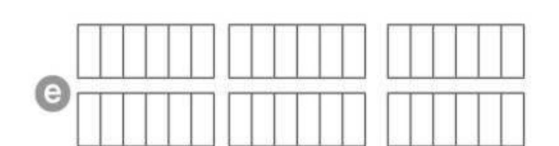


$3\frac{3}{4} = \frac{\dots}{\dots}$



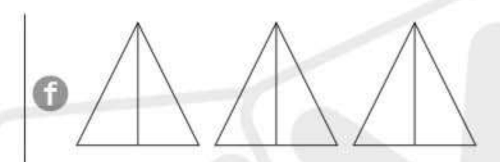


e



$\frac{33}{6}$ = ... $\frac{......}{......}$

f





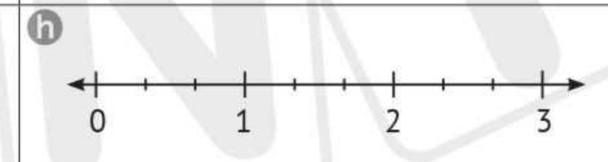
$\frac{6}{2}$ = ...

g



$\frac{......}{......}$ = 3

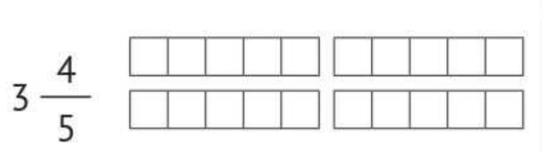
h



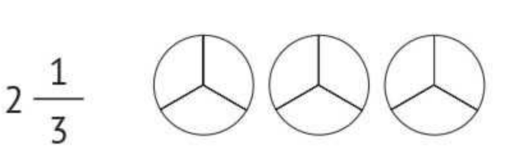
$2\frac{1}{3}$ = $\frac{......}{......}$

3 Shade the models according to the mixed number:

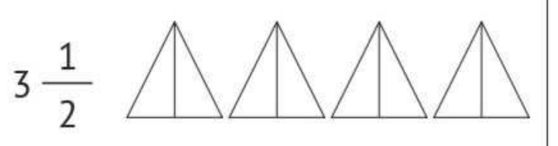
a $3\frac{4}{5}$



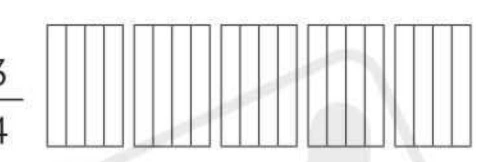
b $2\frac{1}{3}$



c $3\frac{1}{2}$

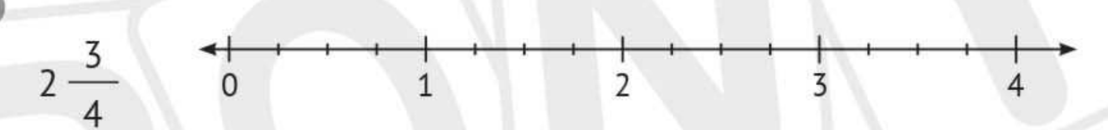


d $4\frac{3}{4}$

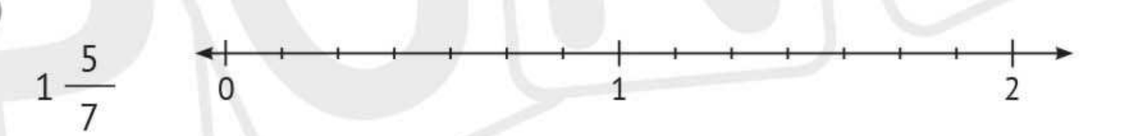


4 Place the following mixed numbers on the number lines:

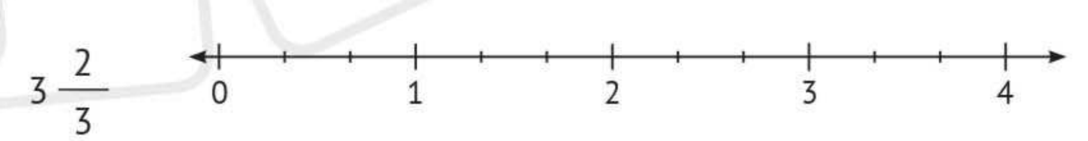
a $2\frac{3}{4}$



b $1\frac{5}{7}$



c $3\frac{2}{3}$



5 Complete using one of the following:

proper fraction , improper fraction , mixed number , whole number

a) $\frac{3}{4}$ is a/an ....

b) $\frac{5}{3}$ is a/an ....

c) $3\frac{1}{4}$ is a/an ....

d) 12 is a/an ....

e) $\frac{15}{5}$ is a/an ....

f) $\frac{16}{5}$ is a/an ....

g) Three-eighths is a/an ....

h) Eight-thirds is a/an ....

6 Complete:

a) $\frac{15}{3} = \dots\dots$

b) $\frac{\dots}{5} = 1$

c) $\frac{\dots}{3} = 3$

d) $\frac{4}{4} = \dots\dots$

e) $\frac{14}{\dots} = 7$

f) $\frac{45}{\dots} = 9$

g) $\frac{12}{4} = \dots\dots$

h) $\frac{\dots}{3} = 1$

7 Convert the mixed numbers to improper fractions:

a) $5\frac{2}{3} = \frac{\dots}{\dots}$

b) $8\frac{1}{2} = \frac{\dots}{\dots}$

c) $3\frac{3}{8} = \frac{\dots}{\dots}$

d) $6\frac{3}{4} = \frac{\dots}{\dots}$

e) $2\frac{1}{7} = \frac{\dots}{\dots}$

f) $3\frac{4}{5} = \frac{\dots}{\dots}$

g) $3\frac{1}{4} = \frac{\dots}{\dots}$

h) $7\frac{1}{2} = \frac{\dots}{\dots}$

8 Convert the improper fractions to mixed numbers:

a) $\frac{12}{5} = \dots\frac{\dots}{\dots}$

b) $\frac{18}{4} = \dots\frac{\dots}{\dots}$

c) $\frac{25}{4} = \dots\frac{\dots}{\dots}$

d) $\frac{15}{8} = \dots\frac{\dots}{\dots}$

e) $\frac{16}{5} = \dots\frac{\dots}{\dots}$

f) $\frac{21}{5} = \dots\frac{\dots}{\dots}$

g) $\frac{65}{6} = \dots\frac{\dots}{\dots}$

h) $\frac{46}{5} = \dots\frac{\dots}{\dots}$

9 Complete:

a) $\frac{\dots}{3} = 4\frac{2}{\dots}$

b) $\frac{45}{\dots} = \dots\frac{\dots}{8}$

c) $\frac{16}{\dots} = 3\frac{1}{\dots}$

d) $\frac{\dots}{\dots} = 2\frac{2}{3}$

e) $\frac{31}{\dots} = 7\frac{\dots}{4}$

f) $\frac{44}{\dots} = \dots\frac{\dots}{7}$

Assessment on Lesson 4

1 Choose the correct answer:

a) $3\frac{3}{5}$ is a/an ....

(proper fraction or improper fraction or mixed number or whole number)

b) $3\frac{1}{5} = \frac{\dots}{\dots}$ $\left(\frac{16}{5} \text{ or } \frac{8}{5} \text{ or } \frac{31}{5} \text{ or } \frac{4}{5}\right)$

c) Three and two fourths = ... $\left(2\frac{3}{4} \text{ or } 3\frac{2}{4} \text{ or } 4\frac{3}{4} \text{ or } 3\frac{1}{4}\right)$

d) .... $= \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$ $\left(\frac{4}{20} \text{ or } \frac{1}{20} \text{ or } \frac{1}{5} \text{ or } \frac{4}{5}\right)$

e) .... $= \frac{8}{9}$ $\left(\frac{4}{6} + \frac{4}{3} \text{ or } \frac{4}{5} + \frac{4}{4} \text{ or } \frac{4}{9} + \frac{4}{9} \text{ or } \frac{8}{4} + \frac{1}{2}\right)$

2 Complete the following:

a) $4\frac{2}{3} = \frac{\dots}{\dots}$ (As an improper fraction)

b) Eight-thirds $= \frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$

c) $\frac{\dots}{8} = 8$

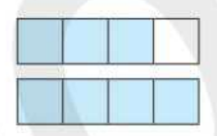
d) $\frac{35}{\dots} = 7$

e) $\frac{28}{\dots} = \dots \frac{\dots}{6}$

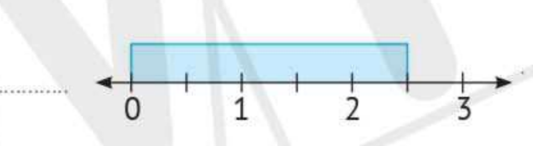
3 Answer the following:

a) Write the mixed number representing each of the following models:

1 ....



2 ....

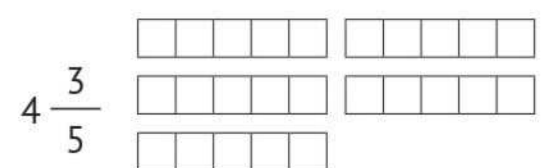


b) Shade the models according to the mixed number shown:

1 $3\frac{2}{3}$



2 $4\frac{3}{5}$

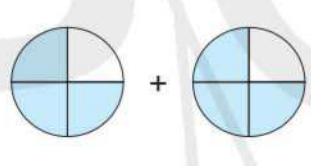


Exercises on Lesson 5

Pieces From the Whole

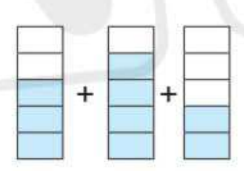
1 Write the fractions representing each of the following models, then find the **sum**:

a



$\frac{\dots}{\dots} + \frac{\dots}{\dots} = \frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$

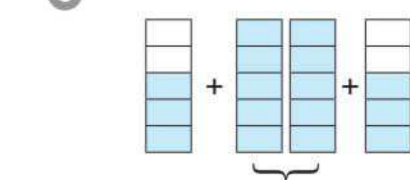
b

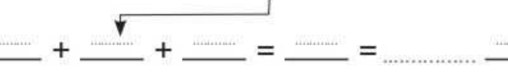


$\frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} = \frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$



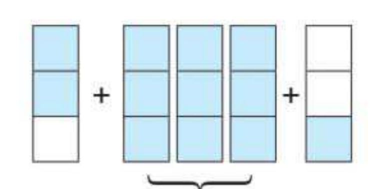
c





$\frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} = \frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$

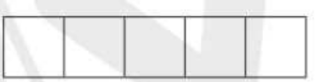
d



$\frac{\dots}{\dots} + \frac{\dots}{\dots} + \frac{\dots}{\dots} = \frac{\dots}{\dots} = \dots$

2 Use the shown models to **subtract**:

a $2 - \frac{4}{5} = \dots$

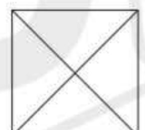
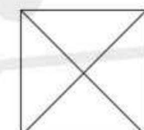
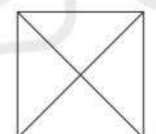
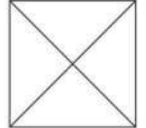


b $3 - \frac{2}{3} = \dots$

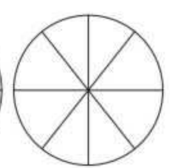
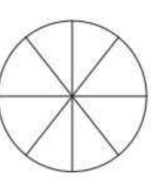
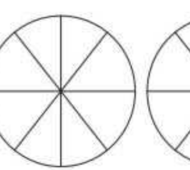




c $4 - \frac{3}{4} = \dots$

d $5 - \frac{3}{8} = \dots$

3 Find the result:

ⓐ $3 + \frac{3}{4} =$ ....

ⓑ $2 + \frac{5}{8} + \frac{7}{8} =$ ....

ⓒ $\frac{7}{9} + \frac{5}{9} + \frac{3}{9} =$ ....

ⓓ $\frac{5}{7} + \frac{2}{7} + \frac{3}{7} + \frac{6}{7} =$ ....

ⓔ $\frac{5}{8} + \frac{4}{8} + \frac{7}{8} + 2 =$ ....

ⓕ $5 - \frac{3}{8} =$ ....

ⓖ $6 - \frac{4}{5} =$ ....

ⓗ $7 - \frac{3}{5} =$ ....

ⓘ $3 - \frac{1}{2} =$ ....

ⓙ $4 - \frac{3}{4} =$ ....

4 Answer the following:

ⓐ Nadia is making falafel for breakfast for a large number of guests. This falafel recipe requires $\frac{1}{2}$ teaspoon of baking soda to make 10 falafel patties. How many teaspoons of baking soda will she use to make 40 falafel patties?

....

....

ⓑ Marwa spends $\frac{3}{4}$ hour to do her Arabic homework, $\frac{2}{4}$ hour to do the math homework, and one hour to do the English homework. Calculate the time she spends doing her homework.

....

....

ⓒ Rehab needs a full bottle of frying oil. If she has a bottle $\frac{3}{5}$ full, how much oil will she need to have a full bottle?

....

....

d) Mona was practicing walking for 3 hours. Her brother walked with her for $\frac{3}{4}$ hour, then her sister walked with her for another $\frac{3}{4}$ hour and she walked alone the rest of the time.

How long did she spend walking alone?

....

....

e) Manar shared two boxes of sweets with her friends. She gave Maha $\frac{3}{8}$ sweets box. She gave Kamal $\frac{5}{8}$ sweets box.

How much of the sweets boxes is left with Manar?

....

....

5 Choose the correct answer:

a) $\frac{5}{5}$ = ... (2 or 5 or 1 or 10)

b) $2\frac{3}{4}$ = ... ($\frac{11}{4}$ or $\frac{3}{10}$ or $\frac{23}{4}$ or $\frac{3}{8}$)

c) $\frac{15}{4}$ = ... ($\frac{3}{4}$ or $5\frac{1}{4}$ or $1\frac{5}{4}$ or $3\frac{3}{4}$)

d) $3\frac{3}{7}$ = ... ($\frac{5}{7} - \frac{1}{7}$ or $\frac{7}{3} + \frac{3}{7}$ or $3 + \frac{3}{7}$ or $\frac{3}{7} + \frac{3}{7}$)

e) $\frac{6}{8}$ = ... ($6 + 8$ or $\frac{3}{4} + \frac{3}{4}$ or $\frac{4}{5} + \frac{2}{3}$ or $\frac{2}{8} + \frac{2}{8} + \frac{2}{8}$)

f) $5\frac{3}{4}$ is a/an ....

(proper fraction or improper fraction or mixed number or whole number)

g) .... is an improper fraction. ($\frac{3}{8}$ or $3\frac{1}{8}$ or 3 or $\frac{8}{3}$)

Assessment on Lesson 5

1 Choose the correct answer:

a) $\frac{12}{6} =$ .... (6 or 12 or 2 or 126)

b) $\frac{47}{5} =$ .... ($4\frac{7}{5}$ or $9\frac{2}{5}$ or $2\frac{9}{5}$ or $2\frac{5}{9}$)

c) $3 + \frac{1}{4} + \frac{3}{4} =$ .... ($3\frac{3}{4}$ or $4\frac{3}{4}$ or $3\frac{4}{8}$ or 4)

d) $5 - \frac{2}{3} =$ .... ($5\frac{1}{3}$ or $4\frac{2}{3}$ or $4\frac{1}{3}$ or $5\frac{2}{3}$)

e) $\frac{3}{9} + \frac{3}{9} + \frac{3}{9} =$ .... (1 or $\frac{9}{27}$ or $\frac{3}{27}$ or $\frac{27}{9}$)

2 Complete the following:

a) $7 = \frac{\dots}{5}$

b) $3\frac{3}{\dots} = \frac{24}{\dots}$

c) $\frac{3}{9} + \frac{7}{9} + \frac{8}{9} =$ ....

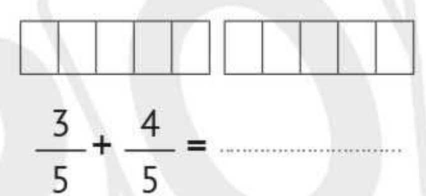
d) $5 - \frac{5}{8} =$ ....

e) $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$ ....

3 Answer the following:

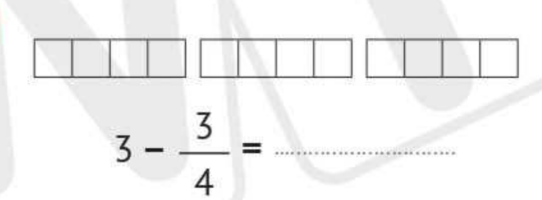
a) Find the result using the following models:

1



$\frac{3}{5} + \frac{4}{5} =$ ....

2



$3 - \frac{3}{4} =$ ....

b) Manar had 3 LE. She bought a pen for $\frac{3}{4}$ LE, an eraser for $\frac{2}{4}$ LE and a ruler for $\frac{2}{4}$ LE. How much money is left with Manar?

....

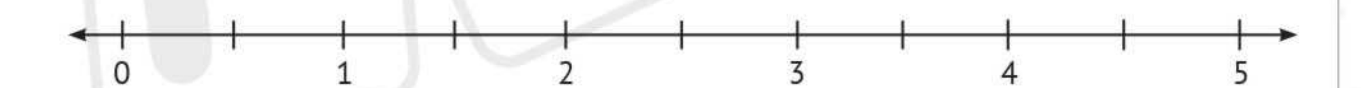
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Exercises on Lesson 6

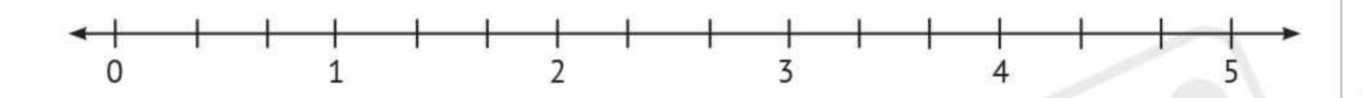
Adding Mixed Numbers

1 **Put each of the following groups of fractions in their places on the number line:**

ⓐ $2\frac{1}{2}$, $3\frac{1}{2}$, $\frac{8}{2}$, $1\frac{1}{2}$, $4\frac{1}{2}$



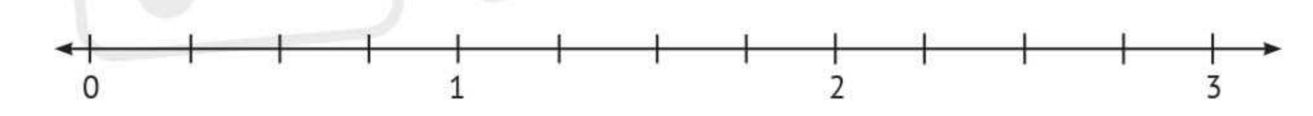
ⓑ $\frac{2}{3}$, $3\frac{1}{3}$, $2\frac{2}{3}$, $1\frac{2}{3}$, $4\frac{1}{3}$



ⓒ $\frac{3}{5}$, $1\frac{1}{5}$, $2\frac{4}{5}$, $1\frac{3}{5}$, $\frac{15}{5}$

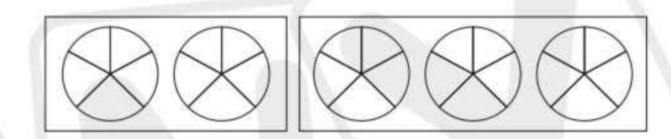


ⓓ $2\frac{3}{4}$, $\frac{1}{4}$, $1\frac{2}{4}$, $2\frac{1}{4}$, $\frac{3}{4}$



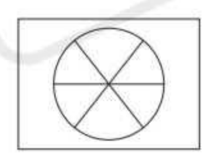
2 Add using the following models:

a) $1\frac{3}{5} + 2\frac{1}{5} =$ ....

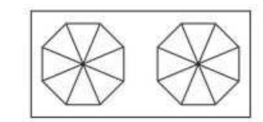


b) $2\frac{1}{4} + 2\frac{3}{4} =$ ....

c) $1\frac{5}{6} + \frac{4}{6} =$ ....



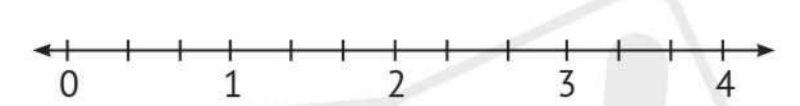
d) $2\frac{4}{8} + 1\frac{4}{8} =$ ....



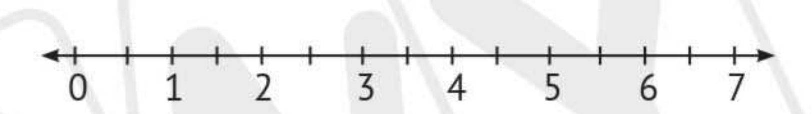
e) $4\frac{1}{2} + 2\frac{1}{2} =$ ....

3 Add using the following number lines:

a) $2\frac{1}{3} + 1\frac{2}{3} =$ ....

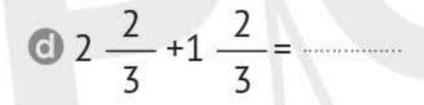


b) $3\frac{1}{2} + 2\frac{1}{2} =$ ....



c) $1\frac{3}{4} + 2\frac{2}{4} =$ ....

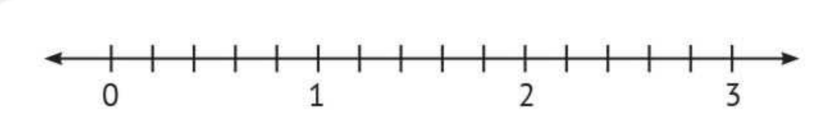




d) $2\frac{2}{3} + 1\frac{2}{3} =$ ....



e) $1\frac{4}{5} + \frac{3}{5} =$ ....



4 Add:

ⓐ $2\frac{3}{4} + 5 =$ ....

ⓑ $4\frac{3}{5} + 2\frac{1}{5} =$ ....

ⓒ $2\frac{3}{8} + 1\frac{4}{8} =$ ....

ⓓ $4\frac{4}{5} + 3\frac{1}{5} =$ ....

ⓔ $2\frac{6}{7} + \frac{1}{7} =$ ....

ⓕ $3\frac{5}{8} + 2\frac{3}{8} =$ ....

ⓖ $3\frac{5}{6} + \frac{3}{6} =$ ....

ⓗ $4\frac{3}{7} + 2\frac{6}{7} =$ ....

5 Answer the following using the strategy you prefer:

ⓐ Ahmed bought $1\frac{1}{2}$ kg of flour, $2\frac{1}{2}$ kg of rice, and $\frac{1}{2}$ kg of sugar.

What is the total mass of the things he bought in kilograms?

....

....

ⓑ The side length of a square is $3\frac{1}{2}$ cm.

What is the perimeter of the square in centimeters?

....

....

ⓒ Salma bought $3\frac{1}{8}$ kg of fruits and $4\frac{5}{8}$ kg of vegetables.

What is the total mass of the items she bought?

....

....

ⓓ Yassin has $5\frac{3}{4}$ LE, and he took $3\frac{2}{4}$ LE from his father.

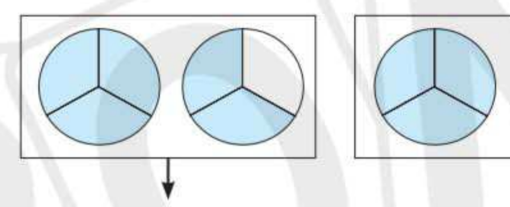
What is the total of Yassin's money?

....

....

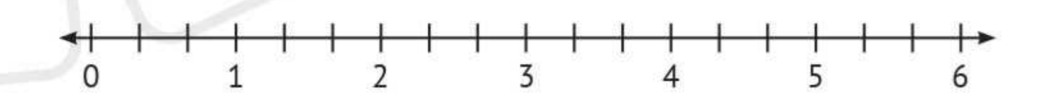
6 **Write an equation representing the addition process shown on each model, then represent it on the number line and find the result:**

ⓐ Model:

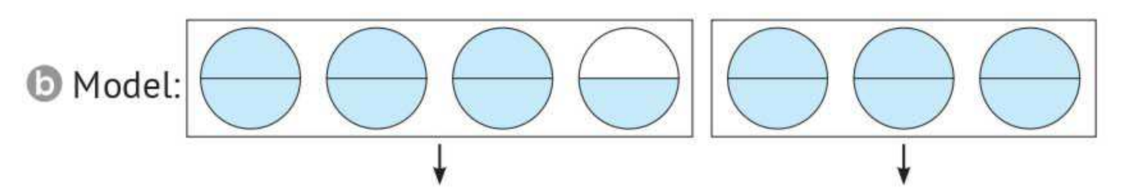


Equation: .... + ... = ...

Number line:

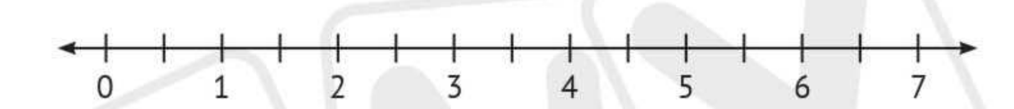


ⓑ Model:

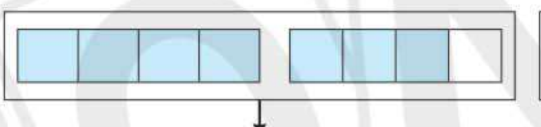


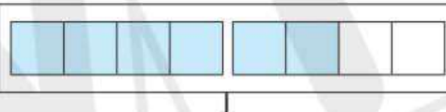
Equation: .... + ... = ...

Number line:



ⓒ Model:





Equation: .... + ...

= ....

Number line:

Assessment on Lesson 6

1 Choose the correct answer:

(a) $4\frac{1}{2} = \frac{\dots}{\dots}$ ($\frac{9}{2}$ or $\frac{5}{2}$ or $\frac{41}{2}$ or $\frac{9}{8}$)

(b) .... $= \frac{25}{4}$ ($2\frac{5}{4}$ or $5\frac{2}{4}$ or $1\frac{6}{4}$ or $6\frac{1}{4}$)

(c) $\frac{15}{3}$ is a/an ....

(proper fraction or improper fraction or mixed number or whole number)

(d) $1\frac{2}{5} + 2\frac{3}{5} =$ .... ($3\frac{5}{10}$ or $3\frac{23}{55}$ or 4 or $\frac{35}{5}$)

(e) $\frac{6}{8} + \frac{4}{8} =$ .... ($1\frac{4}{8}$ or $\frac{10}{16}$ or $1\frac{10}{8}$ or $1\frac{1}{4}$)

2 Complete:

(a) $\frac{23}{\dots} = 5\frac{3}{\dots}$

(b) $3\frac{3}{7} + 2\frac{4}{7} =$ ....

(c) $4\frac{3}{5} + 2\frac{4}{5} =$ ....

(d) $\frac{5}{6} + \frac{5}{6} =$ ....

(e) If the numerator is greater than the denominator, then the fraction is called a/an ....

3 Answer the following

(a) Write the addition equation shown on the number line, then find the result.

Number line: 0 1 2 3 4

Equation: .... + ... = ...

(b) The length of a rectangle is $3\frac{3}{4}$ cm and its width is $2\frac{1}{4}$ cm. Find its perimeter.

....

(c) Fares saves $3\frac{3}{5}$ pounds every week. How much money does he save in 3 weeks?

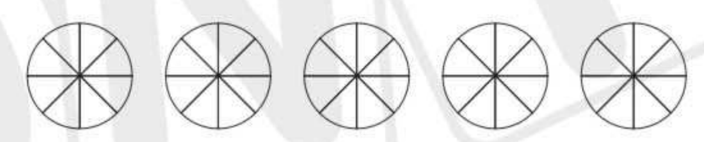
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Exercises on Lesson 7

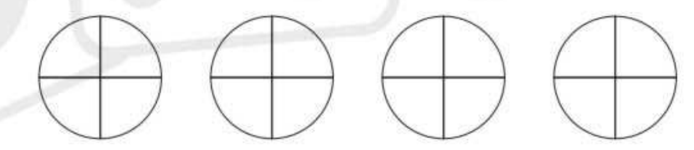
Subtracting Mixed Numbers

1 Subtract using the following models:

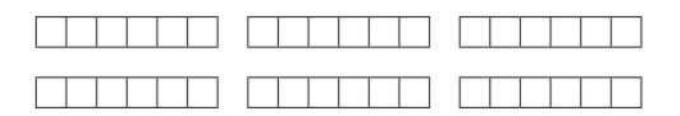
a) $5 - 2\frac{3}{8} =$ ....



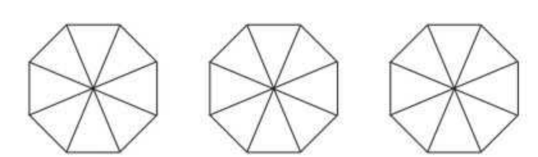
b) $3\frac{1}{4} - 2\frac{3}{4} =$ ....



c) $5\frac{4}{6} - 3\frac{2}{6} =$ ....

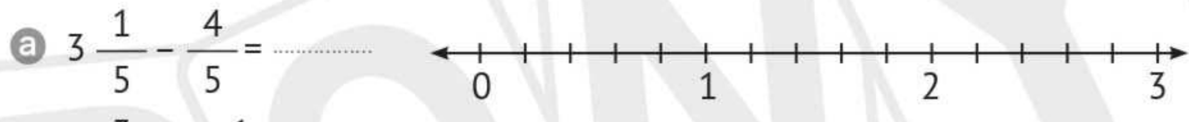


d) $2\frac{5}{8} - \frac{7}{8} =$ ....

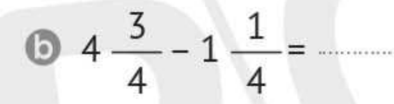


e) $3\frac{1}{2} - 2 =$ ....

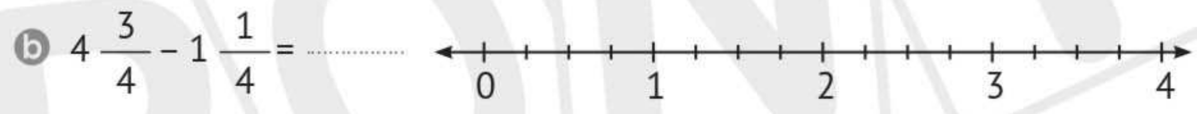
2 Subtract using the following number lines:

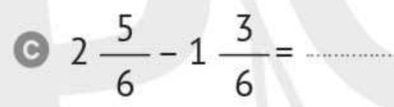


a) $3\frac{1}{5} - \frac{4}{5} =$ ....

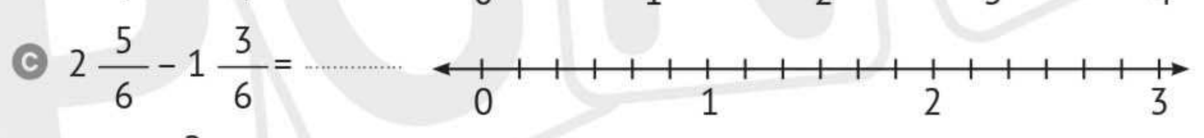


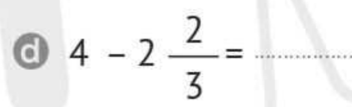
b) $4\frac{3}{4} - 1\frac{1}{4} =$ ....



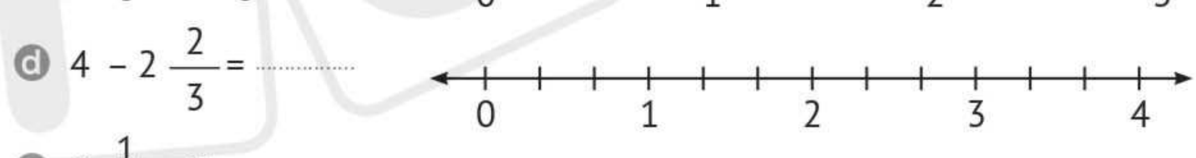


c) $2\frac{5}{6} - 1\frac{3}{6} =$ ....

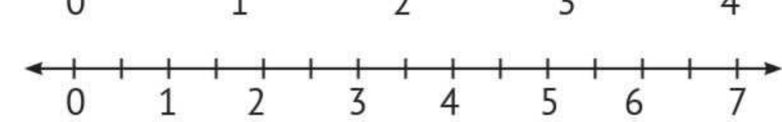




d) $4 - 2\frac{2}{3} =$ ....



e) $6\frac{1}{2} - 3 =$ ....



3 Subtract:

ⓐ $4\frac{3}{4} - 1\frac{2}{4} =$ ....

ⓑ $5\frac{6}{7} - 2\frac{3}{7} =$ ....

ⓒ $8 - 5\frac{3}{8} =$ ....

ⓓ $9 - 1\frac{3}{7} =$ ....

ⓔ $6\frac{3}{8} - 1\frac{5}{8} =$ ....

ⓕ $5\frac{1}{4} - 2\frac{3}{4} =$ ....

ⓖ $6\frac{5}{8} - 3 =$ ....

ⓗ $9\frac{1}{5} - 2 =$ ....

ⓘ $6\frac{3}{5} - 1\frac{3}{5} =$ ....

4 Write the subtraction equation shown on the number line, then find the result:

ⓐ ...... – ...... = ...

ⓑ ...... – ...... = ...

ⓒ ...... – ...... = ...

ⓓ ...... – ...... = ...

5 Answer the following using the strategy you prefer:

ⓐ Eyad is baking a cake. If he has $2\frac{1}{4}$ kg of butter and the recipe requires $1\frac{2}{4}$ kg of butter, how much butter will he have left?

....

b Mahmoud had $7\frac{1}{4}$ pounds. He spent $3\frac{1}{4}$ pounds on Sunday, $2\frac{2}{4}$ pounds on Monday and he spent the rest on Tuesday.

How much money did Mahmoud spend on Tuesday?

....

c A $4\frac{2}{5}$ km long road was paved in three stages. $1\frac{2}{5}$ km were paved in the first stage, $1\frac{1}{5}$ km in the second stage and the rest in the third stage.

How long is the paved road in the third stage?

....

6 Complete:

a $5\frac{1}{2} -$ .... $= 2\frac{1}{2}$

b $4 -$ .... $= 1\frac{1}{4}$

c .... $- 2\frac{3}{5} = 2\frac{2}{5}$

d .... $- 2\frac{2}{7} = 3\frac{3}{7}$

e $5\frac{3}{4} -$ .... $= 3$

f $4\frac{1}{5} -$ .... $= 2\frac{4}{5}$

7 Choose the correct answer:

a .... $- 2\frac{1}{5} = 2\frac{1}{5}$ (Zero or $4\frac{2}{10}$ or $4\frac{2}{5}$ or 5)

b $4 -$ .... $= 3\frac{1}{2}$ ($1\frac{1}{2}$ or $\frac{1}{2}$ or $7\frac{1}{2}$ or $2\frac{1}{2}$)

c .... $- 2\frac{4}{7} = 2\frac{3}{7}$ (5 or 4 or $4\frac{7}{14}$ or $\frac{1}{7}$)

d $2\frac{4}{5} +$ .... $= 3$ ($1\frac{1}{5}$ or $1\frac{4}{5}$ or $\frac{1}{5}$ or $\frac{4}{5}$)

e .... $+ 3\frac{3}{7} = 5\frac{1}{7}$ ($8\frac{4}{7}$ or $2\frac{2}{7}$ or $1\frac{2}{7}$ or $1\frac{5}{7}$)

Assessment on Lesson 7

1 Choose the correct answer:

a) Improper fraction ☐ one whole (= or > or < or ≥)

b) .... + $1\frac{2}{5} = 2\frac{3}{5}$ (4 or 3 or $1\frac{1}{5}$ or $3\frac{1}{5}$)

c) $7 -$ .... $= 2\frac{3}{6}$ ($4\frac{3}{6}$ or $5\frac{3}{6}$ or $9\frac{3}{6}$ or $8\frac{3}{6}$)

d) $\frac{4}{7} =$ ....

($\frac{4}{3} + \frac{4}{4}$ or $\frac{2}{4} + \frac{2}{3}$ or $\frac{3}{7} + \frac{2}{7}$ or $\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7}$)

e) $5\frac{3}{4} =$ .... ($\frac{8}{4}$ or $\frac{23}{4}$ or $\frac{20}{4}$ or $\frac{53}{4}$)

2 Complete the following:

a) $\frac{21}{\ldots} = 4\frac{1}{\ldots}$

b) $5 - 3\frac{1}{5} =$ ....

c) $4\frac{2}{3} - 3 =$ ....

d) $5\frac{8}{9} - 2\frac{4}{9} =$ ....

e) $7\frac{3}{8} - 1\frac{7}{8} =$ ....

3 Malak had $8\frac{3}{4}$ meters of gift wrapping tape, of which she used $2\frac{1}{4}$ meters to wrap the first gift and $1\frac{2}{4}$ meters to wrap another gift. What is the length of the remaining tape?

....

....

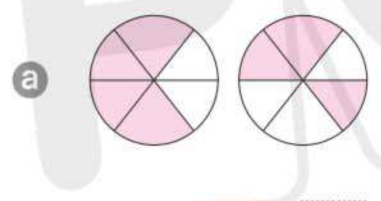
Concept

9.2 Comparing Fractions

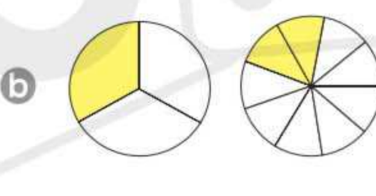
Exercises on Lesson 8

Like Denominators and Numerators

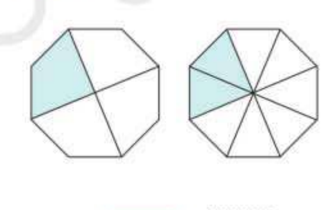
1 Write the fraction that represents the shaded part(s) of each model or number line. Then compare using (<, = or >):

a 

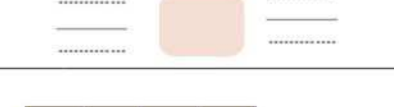
.... ☐ ....

b 

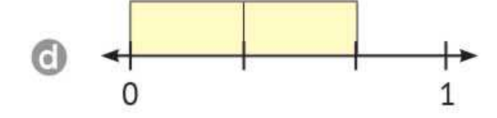
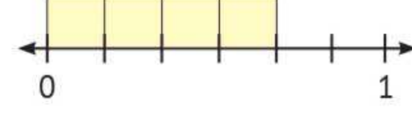
.... ☐ ....

c 

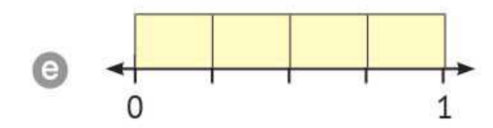
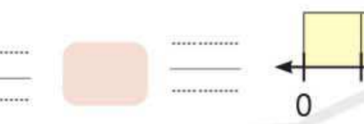
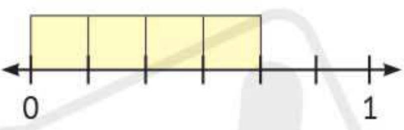
.... ☐ ....

d   

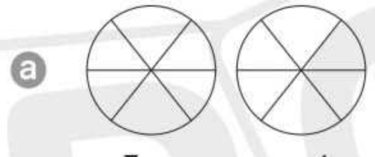
.... ☐ ....

e   

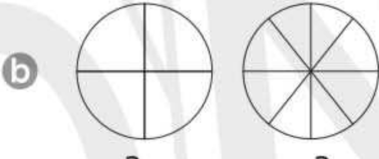
.... ☐ ....

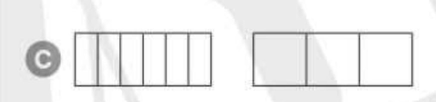
2 Shade each shape to represent the given fractions, then compare using (<, = or >):

a 

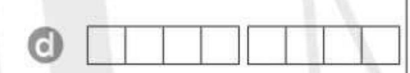
$\frac{3}{6}$ ☐ $\frac{4}{6}$

b 

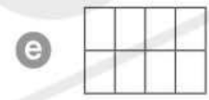
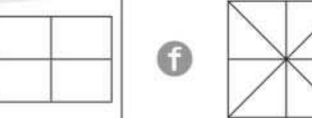
$\frac{2}{4}$ ☐ $\frac{2}{8}$

c 

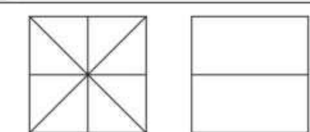
$\frac{2}{6}$ ☐ $\frac{2}{3}$

d 

$\frac{3}{4}$ ☐ $\frac{1}{4}$

e  

$\frac{4}{8}$ ☐ $\frac{2}{4}$

f 

$\frac{1}{8}$ ☐ $\frac{1}{2}$

3 Compare using (<, = or >):

a) $\frac{3}{5}$ ☐ $\frac{3}{7}$

b) $\frac{2}{8}$ ☐ $\frac{2}{3}$

c) $\frac{5}{9}$ ☐ $\frac{4}{9}$

d) 1 ☐ $\frac{7}{8}$

e) $\frac{3}{9}$ ☐ $\frac{3}{4}$

f) $\frac{3}{8}$ ☐ $\frac{2}{8}$

g) 1 ☐ $\frac{5}{5}$

h) $\frac{6}{6}$ ☐ $\frac{8}{8}$

i) $\frac{5}{4}$ ☐ $\frac{3}{4}$

4 Arrange the following in an ascending order:

a) $\frac{3}{9}$, $\frac{5}{9}$, $\frac{1}{9}$, $\frac{2}{9}$, $\frac{4}{9}$ → .... < .... < .... < .... < ....

b) $\frac{5}{8}$, $\frac{5}{6}$, $\frac{5}{4}$, $\frac{5}{9}$, $\frac{5}{7}$ → .... < .... < .... < .... < ....

c) $\frac{1}{5}$, $\frac{1}{9}$, 1 , $\frac{1}{4}$, $\frac{1}{8}$ → .... < .... < .... < .... < ....

d) $\frac{2}{7}$, 1 , $\frac{1}{7}$, $\frac{5}{7}$, $\frac{3}{7}$ → .... < .... < .... < .... < ....

5 Arrange the following in a descending order:

a) $\frac{2}{6}$, $\frac{1}{6}$, $\frac{5}{6}$, $\frac{4}{6}$, $\frac{3}{6}$ → .... > .... > .... > .... > ....

b) $\frac{2}{7}$, $\frac{2}{9}$, $\frac{2}{5}$, $\frac{2}{6}$, $\frac{2}{3}$ → .... > .... > .... > .... > ....

c) $\frac{1}{2}$, $\frac{1}{5}$, 1 , $\frac{1}{7}$, $\frac{1}{3}$ → .... > .... > .... > .... > ....

d) $\frac{6}{8}$, $\frac{1}{8}$, 1 , $\frac{3}{8}$, $\frac{5}{8}$ → .... > .... > .... > .... > ....

6 Answer the following:

ⓐ Each of Ibrahim and Kamal bought a pizza of the same type and size.

Ibrahim ate $\frac{3}{4}$ of his pizza and Kamal ate $\frac{3}{5}$ of his pizza.

Who ate more? Represent what they ate on the models, then compare.



Kamal .... Ibrahim

....

ⓑ Both Salma and Jana have two copies of the same story.

Salma read the story in $\frac{3}{5}$ hour and Jana read it in $\frac{3}{6}$ hour.

Who took longer time to read the story?

....

ⓒ Each of Ahmed, Omar and Youssef bought a bar of chocolate. Ahmed ate $\frac{2}{15}$ of his chocolate bar, Omar ate $\frac{7}{15}$ of his chocolate bar and Youssef ate $\frac{4}{15}$ of his chocolate bar. On the next day, Ahmed ate $\frac{7}{15}$, Omar ate $\frac{8}{15}$ and Youssef ate $\frac{10}{15}$ of their chocolate bars.

- **Answer the following:**

1. How much chocolate did each of them eat?

   Ahmed: .... Omar: .... Youssef: ....

2. How much chocolate is remaining with each of them?

   Ahmed: .... Omar: .... Youssef: ....

3. Who has more chocolate? ....

4. Who has the least amount of chocolate? ....

Assessment on Lesson 8

1 Choose the correct answer:

a) $\frac{3}{8}$ ☐ $\frac{3}{5}$ (< or = or > or ⩾)

b) $\frac{2}{7}$ ☐ $\frac{1}{7}$ (< or = or > or ⩽)

c) $\frac{5}{8}$ > .... ($\frac{5}{7}$ or $\frac{4}{8}$ or $\frac{5}{5}$ or $\frac{8}{8}$)

d) .... $= 2\frac{1}{3}$ ($\frac{21}{3}$ or $\frac{6}{3}$ or $\frac{5}{3}$ or $\frac{7}{3}$)

e) .... $= \frac{13}{5}$ ($1\frac{3}{5}$ or $2\frac{3}{5}$ or $3\frac{1}{5}$ or $3\frac{2}{5}$)

2 Answer the following:

a) Arrange the following in an ascending order: $1, \frac{3}{7}, \frac{3}{2}, \frac{3}{9}, \frac{3}{5}$

Ascending order: .... , ... , ... , ... , ...

b) Arrange the following in a descending order:

$\frac{5}{9}$, $\frac{12}{9}$, 1 , $\frac{3}{9}$, $\frac{1}{9}$

Descending order: .... , ... , ... , ... , ...

c) Malak and Jana are practicing swimming. On Sunday, Jana trained for $\frac{1}{5}$ hour and Malak trained for $\frac{1}{6}$ hour. On Wednesday, Jana trained for $\frac{3}{5}$ hour and Malak trained for $\frac{3}{6}$ hour.

How long did each of them train and who trained for the longest time?

Jana's training time: ....

Malak's training time: ....

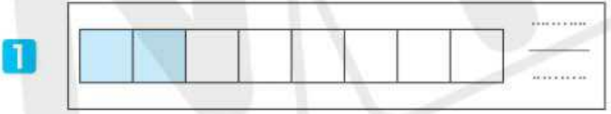
.... trained for the longest time.

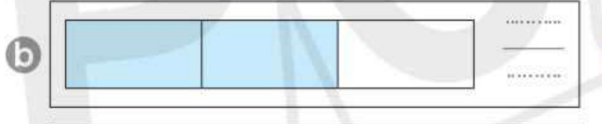
Exercises on Lesson 9

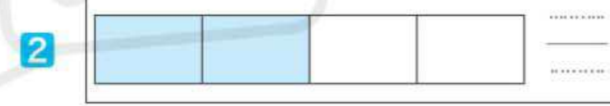
Same Fraction, Different Ways

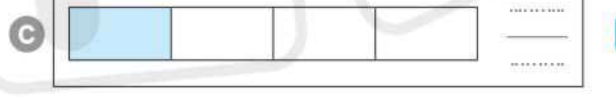
1 Write the fractions representing the shaded parts, and then match the equivalent fractions:

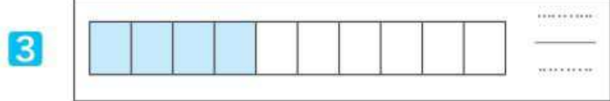
a  $\frac{\cdots}{\cdots}$

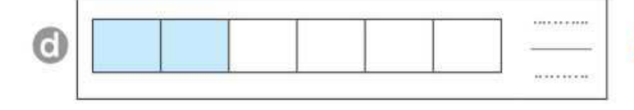
1  $\frac{\cdots}{\cdots}$

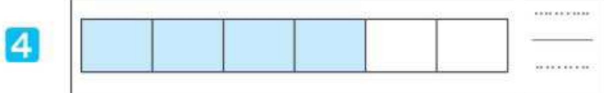
b  $\frac{\cdots}{\cdots}$

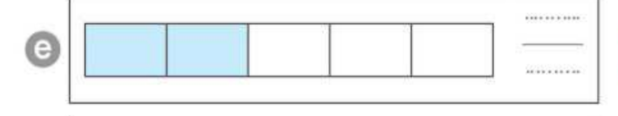
2  $\frac{\cdots}{\cdots}$

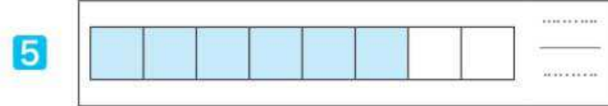
c  $\frac{\cdots}{\cdots}$

3  $\frac{\cdots}{\cdots}$

d  $\frac{\cdots}{\cdots}$

4  $\frac{\cdots}{\cdots}$

e  $\frac{\cdots}{\cdots}$

5  $\frac{\cdots}{\cdots}$

f $\frac{\cdots}{\cdots}$

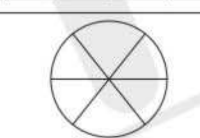
6 $\frac{\cdots}{\cdots}$

2 Shade the models, then write the equivalent fractions:

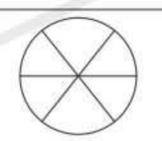
a $\frac{2}{3} = \frac{\cdots}{\cdots}$ →

b $\frac{3}{4} = \frac{\cdots}{\cdots}$ →

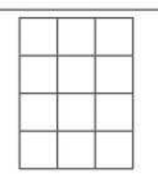
c $\frac{4}{6} = \frac{\cdots}{\cdots}$ →

d $\frac{1}{2} = \frac{\cdots}{\cdots}$ → 

e $\frac{2}{3} = \frac{\cdots}{\cdots}$ →

f $\frac{1}{3} = \frac{\cdots}{\cdots}$ → 

g $\frac{1}{4} = \frac{\cdots}{\cdots}$ →

h $\frac{1}{3} = \frac{\cdots}{\cdots}$ → 

3 Complete:

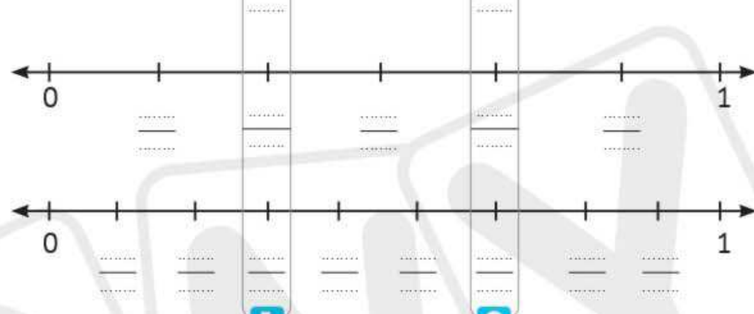
ⓐ $\frac{4}{5} = \frac{8}{\dots}$	ⓑ $\frac{2}{3} = \frac{4}{\dots}$	ⓒ $2\frac{3}{4} = 2\frac{\dots}{12}$
ⓓ $1\frac{1}{2} = 1\frac{\dots}{14}$	ⓔ $\frac{9}{15} = \frac{\dots}{5}$	ⓕ $\frac{\dots}{8} = \frac{6}{16}$
ⓖ $\frac{4}{\dots} = \frac{12}{21}$	ⓗ $\frac{5}{\dots} = \frac{10}{18}$	ⓘ $\frac{\dots}{4} = \frac{12}{16}$
ⓙ $\frac{8}{12} = \frac{\dots}{3}$	ⓚ $\frac{15}{18} = \frac{5}{\dots}$	ⓛ $3\frac{12}{20} = 3\frac{3}{\dots}$
ⓜ $4\frac{\dots}{15} = 4\frac{2}{3}$	ⓝ $\frac{\dots}{30} = \frac{3}{5}$	ⓞ $\frac{9}{\dots} = \frac{3}{4}$

4 Use the following number lines to find the equivalent fractions:

ⓐ 1 $\frac{\dots}{\dots} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$

2 $\frac{\dots}{\dots} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$





ⓑ 1 $\frac{\dots}{\dots} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$



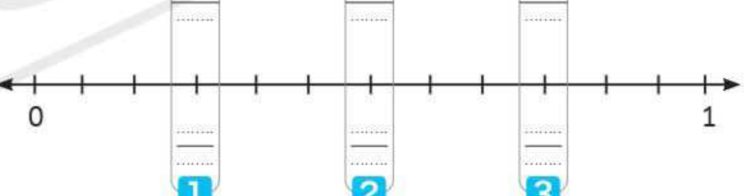


2 $\frac{\dots}{\dots} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$





3 $\frac{\dots}{\dots} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$

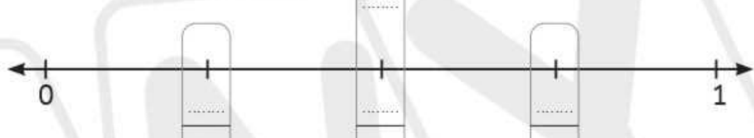


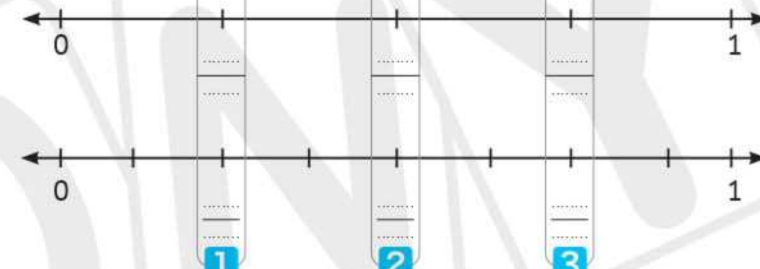
c



1. $\frac{\dots}{\dots} = \frac{\dots}{\dots}$
2. $\frac{\dots}{\dots} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$
3. $\frac{\dots}{\dots} = \frac{\dots}{\dots}$







---

d

1. $\frac{\dots}{\dots} = \frac{\dots}{\dots}$
2. $\frac{\dots}{\dots} = \frac{\dots}{\dots}$
3. $\frac{\dots}{\dots} = \frac{\dots}{\dots}$

(Number lines: 0, 1, 2, 3 — boxes 1, 2, 3)

5 Complete:

a. $\frac{1}{2} = \frac{\dots}{4} = \frac{\dots}{6} = \frac{4}{\dots} = \frac{5}{\dots}$

b. $\frac{1}{3} = \frac{2}{\dots} = \frac{3}{\dots} = \frac{\dots}{12} = \frac{\dots}{15}$

c. $\frac{1}{4} = \frac{2}{\dots} = \frac{\dots}{12} = \frac{4}{\dots} = \frac{\dots}{20}$

d. $\frac{1}{5} = \frac{\dots}{10} = \frac{\dots}{15} = \frac{4}{\dots} = \frac{5}{\dots}$

6 Write two equivalent fractions for each of the following:

a. $\frac{3}{4} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$

b. $\frac{2}{5} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$

c. $\frac{2}{3} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$

d. $\frac{1}{6} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$

e. $\frac{5}{5} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$

f. $\frac{2}{7} = \frac{\dots}{\dots} = \frac{\dots}{\dots}$

7 Answer the following:

ⓐ Kamal and Maha have two cakes of the same size. Kamal ate $\frac{3}{5}$ of his cake. Maha ate a part of her cake equivalent to the part eaten by Kamal. Represent this on the following models and write the equivalent fractions.

Maha's Cake

$\frac{\dots}{\dots} = \frac{\dots}{\dots}$

Kamal's Cake



ⓑ Hisham has a set of flowers consisting of four red flowers, six yellow flowers and two blue flowers.
Write the fraction that represents each type of flower and write its equivalent fraction.



1. The fraction representing the red flowers $= \frac{\dots}{\dots} = \frac{\dots}{\dots}$
2. The fraction representing the yellow flowers $= \frac{\dots}{\dots} = \frac{\dots}{\dots}$
3. The fraction representing the blue flowers $= \frac{\dots}{\dots} = \frac{\dots}{\dots}$

ⓒ A group of 12 children, $\frac{1}{4}$ of this group prefers volleyball, $\frac{2}{4}$ of the group prefers football and $\frac{1}{4}$ of the group prefers basketball.

1. $\frac{1}{4} = \frac{\dots}{12}$
2. $\frac{2}{4} = \frac{\dots}{12}$
3. The number of children who prefer volleyball = ...
4. The number of children who prefer football = ...
5. The number of children who prefer basketball = ...

Assessment on Lesson 9

1 Complete the following:

ⓐ $\frac{20}{24} = \frac{5}{\cdots}$

ⓑ $\frac{1}{\cdots} = \frac{15}{30}$

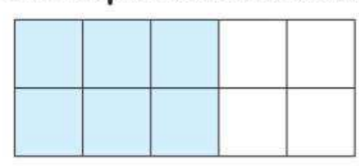
ⓒ $\frac{3}{\cdots} = \frac{2}{\cdots} = \frac{1}{3}$

ⓓ $3\frac{\cdots}{5} = \frac{16}{\cdots}$

ⓔ If $\frac{3}{2} = \frac{9}{6}$, then .... $\frac{\cdots}{\cdots} = 1\frac{3}{6}$

2 Write the fraction representing the shaded part, then shade the equal part in the opposite model and write the equivalent fraction:

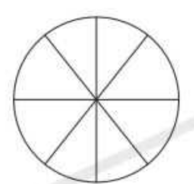
$\frac{\cdots}{\cdots} = \frac{\cdots}{\cdots}$



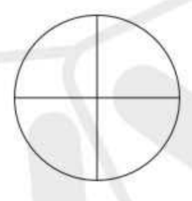
3 Answer the following:

ⓐ Jana had a pie divided into 8 equal parts. She ate 6 parts of it.

Write the fraction that represents the remaining parts, and write an equivalent fraction to it using the model.



$\frac{\cdots}{\cdots} = \frac{\cdots}{\cdots}$



ⓑ Match the equivalent fractions:

1	2	3	4
$2\frac{3}{4}$	$1\frac{2}{5}$	$5\frac{2}{3}$	$3\frac{1}{2}$
$5\frac{4}{6}$	$2\frac{9}{12}$	$3\frac{4}{8}$	$1\frac{6}{15}$
a	b	c	d

Exercises on Lessons 10 & 11

Benchmark Fractions & Half or Whole?

1 Complete:

a) $\frac{1}{2} = \frac{2}{\dots} = \frac{3}{\dots} = \frac{\dots}{8} = \frac{\dots}{10}$

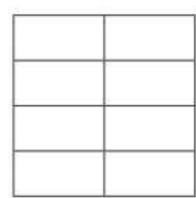
b) $1 = \frac{2}{\dots} = \frac{3}{\dots} = \frac{\dots}{4} = \frac{\dots}{5}$

c) $2 = \frac{4}{\dots} = \frac{\dots}{3} = \frac{8}{\dots} = \frac{10}{\dots}$

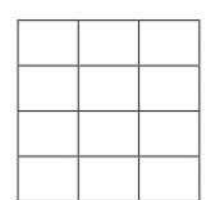
d) $\frac{1}{3} = \frac{2}{\dots} = \frac{\dots}{9} = \frac{4}{\dots} = \frac{\dots}{15}$

e) $1\frac{1}{2} = \frac{3}{\dots} = \frac{\dots}{4} = \frac{9}{\dots} = \frac{\dots}{8}$

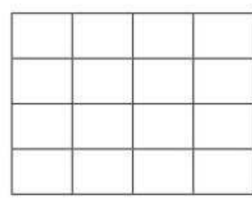
2 Shade the parts representing the fraction and write the equivalent fraction to it:

a) 

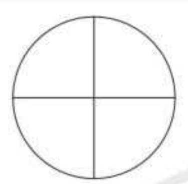
$\frac{1}{2} = \frac{\dots}{\dots}$

b) 

$\frac{2}{3} = \frac{\dots}{\dots}$

c) 

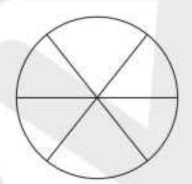
$\frac{3}{4} = \frac{\dots}{\dots}$

d) 

$\frac{1}{2} = \frac{\dots}{\dots}$

e) 

$\frac{1}{4} = \frac{\dots}{\dots}$

f) 

$\frac{1}{3} = \frac{\dots}{\dots}$

3 Match the reference fractions to the fractions:
(You can match more than one fraction to one reference fraction).



$\frac{1}{2}$ 1 $1\frac{1}{2}$ 2

$\frac{2}{4}$ $\frac{0}{3}$ $\frac{6}{4}$ $\frac{8}{4}$ $\frac{9}{18}$ $\frac{7}{7}$ $\frac{15}{10}$ $\frac{6}{6}$ $\frac{14}{7}$ $\frac{6}{3}$

4 Put each of the following fractions in its position on the number line, then decide if the fraction is closer to 0 or $\frac{1}{2}$ or 1:

Fraction	Number Line	The fraction is closer to		
		0	$\frac{1}{2}$	1
a $\frac{1}{6}$	0 ——— 1			
b $\frac{2}{6}$	0 ——— 1			
c $\frac{4}{6}$	0 ——— 1			
d $\frac{5}{6}$	0 ——— 1			
e $\frac{1}{8}$	0 ——— 1			
f $\frac{7}{8}$	0 ——— 1			
g $\frac{3}{8}$	0 ——— 1			
h $\frac{5}{8}$	0 ——— 1			

5 Compare between each two fractions using the unit fraction $\frac{1}{2}$:

a $\frac{3}{8}$, $\frac{5}{6}$

$\frac{1}{2}$ ☐ $\frac{5}{6}$ ⟶ $\frac{\dots}{6} = \frac{1}{2}$

$\frac{1}{2} = \frac{\dots}{8}$ ⟶ $\frac{3}{8}$ ☐ $\frac{1}{2}$

So: $\frac{3}{8}$ ☐ $\frac{5}{6}$

b $\frac{4}{10}$, $\frac{6}{8}$

$\frac{1}{2}$ ☐ $\frac{6}{8}$ ⟶ $\frac{\dots}{8} = \frac{1}{2}$

$\frac{1}{2}$ ☐ $\frac{4}{10}$ ⟶ $\frac{\dots}{10} = \frac{1}{2}$

So: $\frac{4}{10}$ ☐ $\frac{6}{8}$

c $\frac{5}{12}$, $\frac{3}{4}$

$\frac{1}{2}$	☐	$\frac{3}{4}$	⟶	$\frac{\cdots}{4}$	=	$\frac{1}{2}$
$\frac{1}{2}$	☐	$\frac{5}{12}$	⟶	$\frac{\cdots}{12}$	=	$\frac{1}{2}$

So: $\frac{5}{12}$ ☐ $\frac{3}{4}$

d $\frac{8}{16}$, $\frac{6}{10}$

$\frac{1}{2}$	☐	$\frac{6}{10}$	⟶	$\frac{\cdots}{10}$	=	$\frac{1}{2}$
$\frac{1}{2}$	☐	$\frac{8}{16}$	⟶	$\frac{\cdots}{16}$	=	$\frac{1}{2}$

So: $\frac{8}{16}$ ☐ $\frac{6}{10}$

6 Answer the following questions:

a Nour participates in football training. He shot 14 times towards the goal and succeeded in scoring goals in half of the shots. How many goals did he score?

$\left(\frac{1}{2} = \frac{\cdots}{\cdots}\right)$ ⟶ Number of goals = ...

b Sarah wants to share a pizza equally with her brother. She divided the pizza into 20 parts. How many parts will Sarah have?

$\left(\frac{1}{2} = \frac{\cdots}{\cdots}\right)$ ⟶ Number of parts = ...

c Nagy went for a 2-kilometers walk last Saturday with his sister. The distance he covered was measured every $\frac{1}{6}$ kilometer. Nagy stopped after $1\frac{1}{2}$ kilometers waiting for his sister. How many sixths of the distance did Nagy cover?

$\left(1\frac{1}{2} = \frac{\cdots}{\cdots}\right)$ ⟶ Number of sixths = ...

d Madiha made two pizzas and divided each pizza into 8 pieces. If her sister ate $1\frac{1}{2}$ of the pizza, how many pieces of pizza did she eat?

$\left(1\frac{1}{2} = \frac{\cdots}{\cdots}\right)$ ⟶ Number of pieces = ...

7 **Menna made two cakes for her birthday. Her friends ate $\frac{5}{8}$ of one cake and $\frac{5}{10}$ of the other one. Which of the two cakes did the friends eat more of? Use the reference fractions to solve.**

$\frac{1}{2} = \frac{\dots}{10} \longrightarrow \frac{5}{10} \; \square \; \frac{1}{2}$

$\frac{1}{2} = \frac{\dots}{8} \longrightarrow \frac{5}{8} \; \square \; \frac{1}{2}$

Then: $\frac{5}{10} \; \square \; \frac{5}{8}$ So: Her friends ate more of the .... cake.

8 **Hatem scored in his basketball training 14 goals from 18 shots, while his friend Amir scored 8 goals from 16 shots. Whose goals represent a greater fraction according to their shots?**

The fraction of Hatem's goals $= \frac{\dots}{\dots}$

The fraction of Amir's goals $= \frac{\dots}{\dots}$

$\frac{1}{2} = \frac{\dots}{18} \longrightarrow \frac{\dots}{\dots} \; \square \; \frac{1}{2}$

$\frac{1}{2} = \frac{\dots}{16} \longrightarrow \frac{\dots}{\dots} \; \square \; \frac{1}{2}$ So: $\frac{\dots}{\dots} \; \square \; \frac{\dots}{\dots}$

Therefore, ... goals represent a greater fraction.

9 **Arrange the following fractions in ascending and descending orders.**

a $\frac{3}{6}$, $\frac{1}{8}$, $\frac{7}{10}$

Ascending order: .... < .... < ....

Descending order: .... > .... > ....

b $\frac{5}{6}$, $\frac{7}{7}$, $\frac{1}{4}$

Ascending order: .... < .... < ....

Descending order: .... > .... > ....

c $\frac{2}{4}$, $\frac{9}{9}$, $\frac{1}{8}$

Ascending order: .... < .... < ....

Descending order: .... > .... > ....

Assessment on Lessons 10&11

1 Choose the correct answer:

ⓐ The fraction that its numerator is third its denominator is ....

($\frac{1}{4}$ or $\frac{1}{3}$ or $\frac{3}{1}$ or $\frac{2}{3}$)

ⓑ If $\frac{5}{10} = \frac{1}{2}$, then $\frac{7}{10}$ ☐ $\frac{1}{2}$.

(< or = or > or ≤)

ⓒ $1\frac{1}{2}$ = ...

($\frac{15}{10}$ or $\frac{4}{2}$ or $\frac{11}{2}$ or $\frac{5}{2}$)

ⓓ The fraction $\frac{1}{6}$ is closer to ....

($1\frac{1}{2}$ or 1 or $\frac{1}{2}$ or 0)

ⓔ $\frac{15}{7}$ = ...

($1\frac{5}{7}$ or $5\frac{1}{7}$ or $2\frac{1}{7}$ or $1\frac{2}{7}$)

2 Complete the following:

ⓐ In the fraction $\frac{1}{4}$, the numerator = ... the denominator,

and the denominator = ... the numerator.

ⓑ If $\frac{3}{6} = \frac{1}{2}$ and $\frac{5}{10} = \frac{1}{2}$

then: $\frac{6}{10}$ ☐ $\frac{1}{6}$ (< or = or >)

ⓒ $\frac{\dots}{\dots} = 7\frac{1}{4}$

ⓓ $\frac{6}{\dots} = \frac{\dots}{6} = \frac{2}{3}$

ⓔ $\frac{\dots}{4} = \frac{6}{\dots} = \frac{3}{\dots} = 3$

Concept

9.3 Multiplication and Fractions

Exercises on Lessons 12 - 14

Fractions and the Identity Property, Different Numbers, Same Value & Many Missing Multiples

1 Multiply:

a $\frac{4}{7} \times \frac{2}{3} = \text{.........}$

b $\frac{3}{5} \times \frac{1}{2} = \text{.........}$

c $\frac{6}{7} \times \frac{2}{3} = \text{.........}$

d $\frac{5}{8} \times \frac{3}{4} = \text{.........}$

e $\frac{2}{5} \times \frac{1}{3} = \text{.........}$

f $\frac{1}{4} \times \frac{1}{3} = \text{.........}$

g $\frac{2}{3} \times \frac{2}{3} = \text{.........}$

h $\frac{3}{4} \times \frac{3}{4} = \text{.........}$

i $\frac{4}{5} \times 1 = \text{.........}$

j $\frac{5}{8} \times 1 = \text{.........}$

k $1 \times \frac{5}{9} = \text{.........}$

l $1 \times \frac{3}{7} = \text{.........}$

m $\frac{7}{7} \times \frac{1}{2} = \text{.........} = \text{.........}$

n $\frac{4}{4} \times \frac{3}{5} = \text{.........} = \text{.........}$

o $0 \times \frac{5}{9} = \text{.........}$

p $\frac{3}{4} \times 0 = \text{.........}$

q $0 \times \frac{3}{7} = \text{.........}$

r $\frac{1}{5} \times 0 = \text{.........}$

2 Complete:

a $\frac{3}{5} \times \frac{\text{......}}{\text{......}} = \frac{15}{30} = \frac{\text{......}}{2}$

b $\frac{4}{5} \times \frac{3}{\text{......}} = \frac{\text{......}}{20} = \frac{3}{\text{......}}$

c $\frac{\text{......}}{\text{......}} \times \frac{1}{8} = \frac{4}{16} = \frac{\text{......}}{4}$

d $\frac{\text{......}}{\text{......}} \times \frac{2}{3} = \frac{12}{27} = \frac{4}{\text{......}}$

e $\frac{8}{\text{......}} \times \frac{\text{......}}{4} = \frac{\text{......}}{36} = \frac{4}{6} = \frac{2}{\text{......}}$

f $\frac{2}{8} \times \frac{4}{\text{......}} = \frac{\text{......}}{\text{......}} = \frac{2}{4}$

g $\frac{3}{8} \times \frac{4}{\text{......}} = \frac{\text{......}}{48} = \frac{3}{\text{......}} = \frac{1}{\text{......}}$

h $\frac{\text{......}}{\text{......}} \times \frac{3}{6} = \frac{12}{54} = \frac{2}{\text{......}}$

3 Put each of the following fractions in the simplest form:

a) $\frac{6}{12}$ = ... b) $\frac{8}{20}$ = ... c) $\frac{9}{18}$ = ...

d) $\frac{6}{24}$ = ... e) $\frac{12}{16}$ = ... f) $\frac{24}{36}$ = ...

g) $\frac{25}{30}$ = ... h) $\frac{28}{35}$ = ... i) $\frac{14}{28}$ = ...

j) $\frac{36}{48}$ = ... k) $\frac{32}{48}$ = ... l) $\frac{24}{64}$ = ...

4 Complete:

a) $\frac{36}{45} = \frac{4}{5}$ (÷ .... top, ÷ .... bottom)

b) $\frac{24}{64} = \frac{3}{8}$ (÷ .... top, ÷ .... bottom)

c) $\frac{2}{3} = \frac{18}{27}$ (x .... top, x .... bottom)

d) $\frac{3}{5} = \frac{18}{30}$ (x .... top, x .... bottom)

e) $\frac{64}{80} = \frac{8}{10} = \frac{4}{5}$ (÷ .... top, ÷ .... bottom; ÷ .... top, ÷ .... bottom)

f) $\frac{42}{56} = \frac{6}{8} = \frac{3}{4}$ (÷ .... top, ÷ .... bottom; ÷ .... top, ÷ .... bottom)

5 Complete in the same pattern and write 5 equivalent fractions:

a) $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{....}{....}$

b) $\frac{1}{3} = \frac{2}{....} = \frac{....}{....} = \frac{....}{....}$

c) $\frac{2}{3} = \frac{....}{6} = \frac{....}{....} = \frac{....}{....}$

d) $\frac{....}{....} = \frac{....}{....} = \frac{3}{12} = \frac{....}{....}$

e) $\frac{....}{....} = \frac{....}{....} = \frac{....}{....} = \frac{12}{16}$

f) $\frac{3}{....} = \frac{....}{....} = \frac{....}{15} = \frac{12}{20}$

6 Note the first fraction in each row, and then circle the equivalent fractions:

	Fraction	Equivalent Fractions						
a	$\frac{1}{2}$	$\frac{6}{11}$	$\frac{7}{12}$	$\frac{4}{8}$	$\frac{6}{10}$	$\frac{4}{9}$	$\frac{6}{12}$	$\frac{3}{6}$
b	$\frac{2}{3}$	$\frac{4}{10}$	$\frac{7}{15}$	$\frac{6}{9}$	$\frac{5}{5}$	$\frac{4}{6}$	$\frac{8}{12}$	$\frac{1}{4}$
c	$\frac{3}{4}$	$\frac{9}{10}$	$\frac{12}{16}$	$\frac{6}{8}$	$\frac{4}{8}$	$\frac{15}{20}$	$\frac{2}{3}$	$\frac{9}{12}$
d	$\frac{4}{5}$	$\frac{20}{25}$	$\frac{12}{15}$	$\frac{4}{9}$	$\frac{16}{20}$	$\frac{14}{15}$	$\frac{12}{16}$	$\frac{8}{10}$
e	$\frac{1}{6}$	$\frac{4}{12}$	$\frac{4}{24}$	$\frac{2}{12}$	$\frac{5}{30}$	$\frac{3}{18}$	$\frac{2}{10}$	$\frac{1}{4}$
f	$\frac{3}{7}$	$\frac{13}{35}$	$\frac{7}{14}$	$\frac{5}{21}$	$\frac{6}{12}$	$\frac{12}{28}$	$\frac{6}{14}$	$\frac{9}{2}$
g	$\frac{5}{8}$	$\frac{5}{9}$	$\frac{15}{24}$	$\frac{16}{24}$	$\frac{15}{20}$	$\frac{10}{16}$	$\frac{20}{32}$	$\frac{3}{10}$

7 Put (✓) or (✗):

a. $\frac{5}{8} \times 0 = \frac{5}{8}$ ( )

b. $\frac{3}{5} \times \frac{3}{5} = 1$ ( )

c. $\frac{3}{4} = \frac{15}{20}$ ( )

d. $\frac{3}{4} \times \frac{4}{3} = 1$ ( )

e. $\frac{24}{40} = \frac{4}{5}$ ( )

8 Answer the following:

ⓐ Hossam has 12 crayons, and $\frac{2}{3}$ of them are blue. How many blue crayons are there?

$\frac{\dots\dots}{\dots\dots} = \frac{\dots\dots}{\dots\dots}$ ⟶ Number of blue crayons = ...

ⓑ Mona made 24 pieces of cake to celebrate Eid Al-Fitr. If $\frac{3}{4}$ of the cake pieces contain walnuts, how many cake pieces contain walnuts?

$\frac{\dots\dots}{\dots\dots} = \frac{\dots\dots}{\dots\dots}$ ⟶ Number of cake pieces = ...

ⓒ Heba has two cakes of the same size. She divided the first cake into 6 pieces and decorated two pieces in blue. She divided the second cake into 18 pieces. She wants to decorate a part of the second cake with blue color, it should be equal to the two pieces in the first cake. How many pieces should she decorate?

$\frac{\dots\dots}{\dots\dots} = \frac{\dots\dots}{\dots\dots}$ ⟶ Number of pieces = ...

9 Choose the correct answer:

ⓐ $\frac{3}{8} \times \frac{\dots\dots}{\dots\dots} = \frac{3}{8}$ ($\frac{1}{2}$ or $\frac{2}{3}$ or $\frac{5}{5}$ or $\frac{2}{4}$)

ⓑ $\frac{3}{4} \times$ .... $= 0$ (1 or $\frac{4}{3}$ or $\frac{1}{3}$ or 0)

ⓒ .... $\times \frac{6}{6} = \frac{3}{5}$ ($\frac{3}{5}$ or $\frac{9}{11}$ or $\frac{5}{3}$ or $\frac{1}{2}$)

ⓓ $\frac{3}{8} \times \frac{8}{6} =$ .... ($\frac{3}{2}$ or $\frac{3}{8}$ or $\frac{1}{2}$ or $\frac{11}{14}$)

ⓔ $\frac{12}{24} =$ .... (in the simplest form) ($\frac{1}{2}$ or $\frac{6}{12}$ or $\frac{4}{8}$ or $\frac{3}{6}$)

ⓕ $\frac{16}{48} =$ .... (in the simplest form) ($\frac{8}{14}$ or $\frac{4}{12}$ or $\frac{2}{6}$ or $\frac{1}{3}$)

ⓖ .... is the Identity Property of Multiplication. (0 or 1 or 2 or 3)

ⓗ .... is the Identity Property of Addition. (0 or 1 or 2 or 3)

ⓘ $\frac{5}{7} \times$ .... $= 1$ ($\frac{5}{7}$ or 1 or $\frac{7}{5}$ or $\frac{1}{5}$)

Assessment on Lessons 12-14

1 Choose the correct answer:

a) $\frac{3}{5} \times$ .... $= \frac{3}{5}$ ($\frac{3}{5}$ or $\frac{5}{3}$ or $\frac{3}{3}$ or 0)

b) $\frac{16}{24} =$ .... (in the simplest form) ($\frac{2}{3}$ or $\frac{4}{6}$ or $\frac{8}{12}$ or $\frac{1}{2}$)

c) $\frac{13}{6} =$ .... ($1\frac{3}{8}$ or $3\frac{1}{6}$ or $2\frac{1}{6}$ or $1\frac{2}{6}$)

d) $\frac{5}{8} = \frac{15}{\dots}$ (81 or 42 or 61 or 31)

e) $\frac{5}{8}$ ☐ $\frac{5}{6}$ (< or = or > or ≥)

2 Complete the following:

a) $\frac{3}{8} \times \frac{\dots}{\dots} = \frac{12}{24} = \frac{\dots}{2}$

b) $\frac{\dots}{\dots} \times \frac{2}{2} = \frac{6}{8}$

c) $\frac{1}{3} = \frac{2}{\dots} = \frac{\dots}{9} = \frac{4}{\dots}$

d) The fraction $\frac{12}{36}$ in the simplest form is $\frac{\dots}{\dots}$

3 Answer the following:

a) Find the result:

1) $2\frac{3}{8} + 1\frac{2}{8} =$ ....

2) $7\frac{1}{3} - 2\frac{2}{3} =$ ....

b) Zena ate $\frac{1}{4}$ of a pizza. If the pizza was divided into 12 equal pieces, how many pieces did Zena eat? $\frac{1}{4} = \frac{\dots}{12}$

The number of pieces Zena ate = ...

Exercises on Lesson 15

Multiplying by a Whole

1 Draw a **bar model** and write **addition** process and **multiplication** equations for the fraction:

	Fraction	Bar model	Addition	Multiplication
a	$\frac{2}{3}$		.... + ... = $\frac{2}{3}$	.... x .... = $\frac{2}{3}$
b	$\frac{3}{4}$			
c	$\frac{4}{5}$			
d	$\frac{3}{5}$			
e	$\frac{3}{6}$			
f	$\frac{5}{6}$			
g	$\frac{4}{7}$			
h	$\frac{4}{8}$			

2 Multiply:

a) $\frac{3}{8} \times 8 =$ ....
b) $\frac{4}{5} \times 7 =$ ....
c) $\frac{1}{4} \times 4 =$ ....

d) $\frac{1}{3} \times 3 =$ ....
e) $\frac{2}{5} \times 3 =$ ....
f) $\frac{3}{4} \times 2 =$ ....

g) $\frac{4}{5} \times 3 =$ ....
h) $\frac{1}{8} \times 2 =$ ....
i) $\frac{1}{7} \times 3 =$ ....

j) $\frac{2}{5} \times 3 =$ ....
k) $\frac{2}{7} \times 3 =$ ....
l) $\frac{3}{10} \times 2 =$ ....

3 Complete:

a) $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} =$ .... x $\frac{1}{6} =$ ....

b) $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$ .... x $\frac{1}{5} = \frac{\dots}{\dots} =$ ....

c) $\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} =$ .... x .... $= \frac{\dots}{\dots} =$ ....

d) $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$ .... x .... $= \frac{\dots}{\dots} =$ ....

e) $5 \times \frac{1}{8} =$ .... + ... + ... + ... + ... $= \frac{\dots}{\dots}$

f) $4 \times \frac{1}{5} =$ .... + ... + ... + ... $= \frac{\dots}{\dots}$

g) $3 \times \frac{2}{6} =$ .... + ... + ... $= \frac{\dots}{\dots} =$ ....

h) $3 \times \frac{1}{9} =$ .... + ... + ... $= \frac{\dots}{\dots} =$ ....

4 Find the result in the simplest form:

a) $\frac{5}{8} + \frac{3}{8} =$ ....

b) $\frac{6}{9} + \frac{7}{9} =$ ....

c) $5 + \frac{3}{7} =$ ....

d) $2\frac{1}{3} + 3\frac{2}{3} =$ ....

e) $4\frac{5}{8} + 1\frac{1}{8} =$ ....

f) $\frac{9}{12} - \frac{3}{12} =$ ....

g) $5\frac{7}{8} - 3\frac{5}{8} =$ ....

h) $7 - 3\frac{1}{4} =$ ....

i) $5\frac{3}{8} - 3 =$ ....

j) $7\frac{1}{5} - 2\frac{4}{5} =$ ....

Assessment on Lesson 15

1 Choose the correct answer:

ⓐ $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$ ....

($4 \times \frac{1}{5}$ or 5×1 or $3 \times \frac{1}{5}$ or $\frac{1}{5} \times \frac{1}{5}$)

ⓑ $\frac{3}{6} \times$ .... $= 1$ (0 or 1 or 2 or 3)

ⓒ $\frac{6}{8} \times$ .... $= \frac{3}{4}$ (0 or 1 or 2 or $\frac{3}{4}$)

ⓓ $\frac{42}{8} =$ .... ($4\frac{3}{8}$ or $2\frac{4}{8}$ or $5\frac{1}{4}$ or $1\frac{5}{4}$)

ⓔ $\frac{5}{8} + \frac{1}{8} =$ .... ($\frac{3}{4}$ or $\frac{6}{16}$ or $\frac{4}{8}$ or $\frac{5}{16}$)

2 Complete the following:

ⓐ $\frac{3}{12} \times 2 = \frac{\cdots}{\cdots} = \frac{\cdots}{\cdots}$

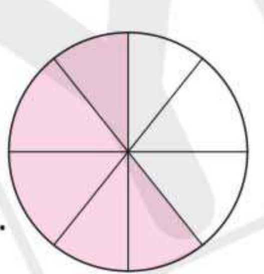
ⓑ $3 \times \frac{2}{7} =$ .... + ... + ... = ...

ⓒ $\frac{4}{7} = \frac{2}{7} +$ .... + ...

ⓓ $\frac{8}{9} - \frac{3}{9} =$ ....

3 Answer the following:

ⓐ Write addition and multiplication equations to show the shaded part.



1 Addition equation: ....

2 Multiplication equation: ....

ⓑ Zeyad saves $\frac{3}{4}$ pounds daily.

How much money does he save in 8 days?

....

....

Choose the correct answer:

1 $3\frac{1}{5}$ = ... (as an improper fraction)

ⓐ $\frac{15}{5}$ ⓑ $\frac{1}{5}$ ⓒ $\frac{16}{5}$ ⓓ $\frac{8}{5}$

2 $5 - 2\frac{1}{4}$ = ...

ⓐ $7\frac{1}{4}$ ⓑ $3\frac{1}{4}$ ⓒ $2\frac{1}{4}$ ⓓ $2\frac{3}{4}$

3 $\frac{3}{4}$ ...... $\frac{3}{7}$

ⓐ $<$ ⓑ $>$ ⓒ $=$ ⓓ $\leq$

4 $....... = \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$

ⓐ $\frac{1}{5}$ ⓑ $\frac{3}{5}$ ⓒ $\frac{4}{5}$ ⓓ 3

5 Three sevenths = ...

ⓐ 37 ⓑ $\frac{3}{7}$ ⓒ $\frac{7}{3}$ ⓓ $3\frac{1}{7}$

6 $3\frac{2}{3}$ is called ....

ⓐ a proper fraction
ⓑ an improper fraction
ⓒ a mixed number
ⓓ a whole number

7 $\frac{12}{5}$ = ... (as a mixed number)

ⓐ $2\frac{2}{5}$ ⓑ $2\frac{1}{5}$ ⓒ $1\frac{2}{5}$ ⓓ $2\frac{2}{12}$

8 The multiplicative identity element is ....

ⓐ 0 ⓑ 1 ⓒ 2 ⓓ $\frac{1}{2}$

9 $\frac{3}{4} = \frac{......}{40}$

ⓐ 3 ⓑ 6 ⓒ 15 ⓓ 30

10 $\frac{2}{5} \times \frac{3}{3}$ = ...

ⓐ $\frac{2}{5}$ ⓑ $\frac{6}{8}$ ⓒ $\frac{9}{10}$ ⓓ $\frac{3}{3}$

11 $2\frac{5}{7} + 3\frac{2}{7}$ = ...

ⓐ 5 ⓑ 6 ⓒ $6\frac{7}{7}$ ⓓ $5\frac{7}{14}$

12 $\frac{3}{5}$ = ...

ⓐ $\frac{9}{15}$ ⓑ $\frac{5}{15}$ ⓒ $\frac{8}{10}$ ⓓ $\frac{2}{3}$

13 $2\frac{5}{7}$ ...... $2\frac{5}{8}$

ⓐ $<$ ⓑ $>$ ⓒ $=$ ⓓ $\leq$

14 .... is a unit fraction.

ⓐ $\frac{1}{2}$ ⓑ $\frac{2}{7}$ ⓒ $\frac{3}{8}$ ⓓ $\frac{3}{1}$

15 Three .... = 1

ⓐ halves ⓑ thirds ⓒ fourths ⓓ fifths

16 $\frac{3}{8}$ is called ....

ⓐ a proper fraction ⓒ a mixed number
ⓑ an improper fraction ⓓ a whole number

17 In the fraction: $\frac{4}{9}$, the numerator is ....

ⓐ 4 ⓑ 9 ⓒ 13 ⓓ 36

18 $\frac{5}{9}$ = ...

ⓐ $\frac{3}{9} + \frac{2}{9} + \frac{2}{9}$ ⓑ $\frac{2}{3} + \frac{2}{3} + \frac{1}{3}$ ⓒ $\frac{2}{9} + \frac{2}{9} + \frac{1}{9}$ ⓓ $\frac{1}{3} + \frac{1}{3} + \frac{3}{3}$

19 $\frac{15}{6} = \frac{......}{2}$

ⓐ 3 ⓑ 5 ⓒ 1 ⓓ 2

20 $\frac{1}{4}+\frac{1}{4}=$ …………

ⓐ 2 ⓑ $\frac{2}{8}$ ⓒ $\frac{1}{2}$ ⓓ $\frac{1}{4}$

21 How many sevenths are there in whole one? …………

ⓐ 1 ⓑ 3 ⓒ 5 ⓓ 7

22 $\frac{2}{9}\times$ …… $=\frac{2}{9}$

ⓐ 0 ⓑ 1 ⓒ 2 ⓓ 9

23 $9\frac{1}{5}-3=$ …………

ⓐ 6 ⓑ $6\frac{1}{5}$ ⓒ $5\frac{2}{5}$ ⓓ $5\frac{1}{5}$

24 If $\frac{2}{9}=\frac{x}{18}$, then $x=$ ………

ⓐ 2 ⓑ 3 ⓒ 4 ⓓ 18

25 Which of the following has a value of $\frac{5}{6}$?

ⓐ $\frac{5}{6}+\frac{5}{6}+\frac{5}{6}+\frac{5}{6}+\frac{5}{6}$ ⓑ $\frac{1}{6}+\frac{2}{6}+\frac{3}{6}+\frac{4}{6}+\frac{5}{6}$ ⓒ $\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}+\frac{1}{6}$ ⓓ $\frac{1}{5}+\frac{1}{5}+\frac{1}{5}+\frac{1}{5}+\frac{1}{5}$

26 $1\frac{1}{4}+\frac{3}{4}=$ …………

ⓐ $2\frac{1}{4}$ ⓑ 2 ⓒ 4 ⓓ $2\frac{3}{4}$

27 $3\frac{5}{8}-2\frac{1}{8}=$ …………

ⓐ $2\frac{1}{2}$ ⓑ $2\frac{4}{8}$ ⓒ $1\frac{6}{8}$ ⓓ $1\frac{1}{2}$

28 $2\frac{1}{8}$ is equivalent to …………

ⓐ $\frac{17}{8}$ ⓑ $\frac{17}{1}$ ⓒ $\frac{21}{8}$ ⓓ $\frac{16}{8}$



Essay Problems:

1	**Order the following fractions from least to greatest:** $\frac{15}{4}, \frac{15}{7}, \frac{15}{5}, \frac{15}{8}, \frac{15}{6}$ **The order is:** .... , ... , ... , ... , ...
2	**Order the following fractions from greatest to least:** $\frac{3}{11}, \frac{9}{11}, \frac{4}{11}, \frac{8}{11}, \frac{5}{11}$ **The order is:** .... , ... , ... , ... , ...
3	**Ali bought 6 oranges, he ate $3\frac{1}{2}$ oranges. How many oranges are left?** ....
4	**Adam has one loaf of bread. He ate $\frac{3}{4}$ of it. How much is left?** ....
5	**Hany drank $1\frac{3}{8}$ liters of water. Samir drank $1\frac{5}{8}$ liters of water. How many liters of water did Hany and Samir drink?** ....
6	**Badr bought $1\frac{1}{2}$kg of sugar. $2\frac{1}{2}$kg of flour and $1\frac{1}{2}$kg of rice. What is the total mass?** ....
7	**Amir has 12 cakes. He ate $\frac{1}{4}$ of them. How many cakes did Amir ate?** ....



1) Choose the correct answer:

1 *Which of the following is a unit fraction?*

(A) $\frac{1}{8}$ (B) $\frac{3}{8}$ (C) $\frac{8}{8}$ (D) $\frac{8}{1}$

2 *Which is correct decomposition of $\frac{5}{9}$ using unit fractions?*

(A) $\frac{1}{9}+\frac{1}{9}+\frac{1}{9}+\frac{2}{9}=\frac{5}{9}$

(B) $\frac{1}{9}+\frac{4}{9}=\frac{5}{9}$

(C) $\frac{3}{9}+\frac{2}{9}=\frac{5}{9}$

(D) $\frac{1}{9}+\frac{1}{9}+\frac{1}{9}+\frac{1}{9}+\frac{1}{9}=\frac{5}{9}$

3 *Which equation is not a correct decomposition of $\frac{10}{11}$*

(A) $\frac{1}{11}+\frac{2}{11}+\frac{3}{11}+\frac{4}{11}=\frac{10}{11}$

(B) $\frac{1}{11}+\frac{2}{11}+\frac{8}{11}=\frac{10}{11}$

(C) $\frac{5}{11}+\frac{5}{11}=\frac{10}{11}$

(D) $\frac{1}{11}+\frac{2}{11}+\frac{2}{11}+\frac{2}{11}+\frac{3}{11}=\frac{10}{11}$

4 $\frac{3}{9}+\frac{6}{9}=$ …………

(A) $\frac{3}{9}$ (B) $\frac{9}{18}$ (C) 1 (D) $\frac{6}{9}$

5 *Which of the following is an improper fraction?*

(A) $2\frac{1}{5}$ (B) $\frac{5}{7}$ (C) $\frac{1}{4}$ (D) $\frac{3}{2}$

6 *Which of the following is a mixed number?*

(A) $\frac{3}{2}$ (B) $\frac{51}{5}$ (C) $\frac{2}{3}$ (D) $5\frac{1}{2}$

7 $4\frac{1}{2}$ = ... *(as an improper fraction)*

(A) $\frac{5}{2}$ (B) $\frac{7}{2}$ (C) $\frac{9}{2}$ (D) $\frac{9}{4}$

8 $\frac{20}{7}$ = ... *(as a mixed number)*

(A) $3\frac{1}{7}$ (B) $2\frac{6}{7}$ (C) $2\frac{1}{7}$ (D) $1\frac{6}{7}$

9 $\frac{38}{6}$ = ... *(as a mixed number)*

(A) $6\frac{2}{6}$ (B) $2\frac{5}{6}$ (C) $2\frac{1}{6}$ (D) $5\frac{3}{6}$

10 *Which of the following mixed numbers is equal to* $\frac{6}{5}$ *?*

(A) $1\frac{1}{2}$ (B) $1\frac{1}{12}$ (C) $1\frac{1}{5}$ (D) $1\frac{1}{6}$

11 $\frac{3}{4} + \frac{1}{4}$ = ...

(A) $\frac{1}{4}$ (B) $\frac{9}{18}$ (C) 1 (D) $\frac{20}{81}$

12 $4 + \frac{7}{11} + 2 + \frac{1}{11}$ = ...

(A) $6\frac{8}{11}$ (B) $6\frac{8}{22}$ (C) $2\frac{6}{11}$ (D) $7\frac{8}{11}$

13 $1\frac{1}{4} + \frac{3}{4}$ = ...

(A) $2\frac{1}{4}$ (B) 2 (C) 4 (D) $2\frac{3}{4}$

14 $2\frac{1}{5} + 1\frac{2}{5}$ = …………

A) $3\frac{3}{5}$ B) $2\frac{2}{5}$ C) $4\frac{4}{5}$ D) 4

15 $1 - \frac{3}{5}$ = ………….

A) $1\frac{3}{5}$ B) $\frac{2}{5}$ C) $\frac{3}{5}$ D) $1\frac{2}{5}$

16 $3 - 2\frac{1}{4}$ = …………

A) $1\frac{3}{4}$ B) $2\frac{3}{4}$ C) $\frac{3}{4}$ D) $5\frac{1}{4}$

17 $5\frac{5}{9} - 2\frac{1}{9}$ = …………

A) $3\frac{4}{0}$ B) $3\frac{4}{9}$ C) $7\frac{4}{9}$ D) $7\frac{6}{9}$

18 *Which of the following fractions is the least?*

A) $\frac{1}{5}$ B) $\frac{2}{5}$ C) $\frac{3}{5}$ D) $\frac{4}{5}$

19 $\frac{1}{4} < \frac{1}{\dots\dots\dots}$

A) 8 B) 7 C) 5 D) 3

20 *Which relation is correct?*

A) $\frac{7}{12} > \frac{7}{9}$ B) $\frac{7}{8} < \frac{7}{10}$ C) $\frac{7}{13} < \frac{7}{11}$ D) $\frac{7}{15} > \frac{7}{9}$

21 *Which relation is correct?*

A) $\frac{3}{7} > \frac{5}{7}$ B) $\frac{6}{7} < \frac{4}{7}$ C) $\frac{1}{7} > \frac{3}{7}$ D) $\frac{1}{7} < \frac{5}{7}$

22 $\frac{7}{12}$ *is closer to the benchmark fraction …………*

A) 1 B) $\frac{1}{2}$ C) $\frac{1}{4}$ D) 0

23 *Which of the following fractions is greater than 1?*

A) $\frac{4}{5}$ B) $\frac{5}{8}$ C) $\frac{7}{5}$ D) $\frac{9}{10}$

24 *Which number fits in the blank?* $\frac{2}{3} = \frac{18}{\dots\dots}$

A) 6 B) 9 C) 19 D) 27

25 *What is the missing numerator?* $\frac{25}{35} = \frac{\dots\dots}{7}$

A) 3 B) 5 C) 10 D) 15

26 *What fraction is not equivalent to* $\frac{3}{9}$ *?*

A) $\frac{6}{12}$ B) $\frac{5}{15}$ C) $\frac{2}{6}$ D) $\frac{1}{3}$

27 $\frac{2}{7} \times 3 = \dots\dots\dots$

A) $\frac{5}{7}$ B) $\frac{6}{7}$ C) $\frac{5}{21}$ D) $\frac{6}{21}$

28 $\frac{14}{3} = \dots\dots\dots$ *(as a mixed number)*

A) $4\frac{1}{3}$ B) $3\frac{2}{4}$ C) $4\frac{2}{3}$ D) $2\frac{2}{3}$

29 $2\frac{3}{7} = \dots\dots\dots$ *(as an improper fraction)*

A) $\frac{17}{3}$ B) $\frac{17}{7}$ C) $\frac{14}{7}$ D) $\frac{11}{7}$

30 $2\frac{3}{7} + 3\frac{4}{7}$ = ...

A) $5\frac{3}{7}$ B) $2\frac{2}{7}$ C) $4\frac{4}{7}$ D) 6

31 $2 - 1\frac{3}{5}$ = ...

A) $1\frac{3}{5}$ B) $\frac{2}{5}$ C) $\frac{3}{5}$ D) $1\frac{2}{5}$

32 $2 + 1\frac{3}{5}$ = ...

A) $3\frac{3}{5}$ B) $2\frac{3}{5}$ C) $\frac{3}{5}$ D) $5\frac{1}{5}$

33 $5\frac{1}{6} - 2\frac{5}{6}$ = ...

A) $1\frac{4}{6}$ B) $2\frac{2}{6}$ C) $7\frac{5}{6}$ D) $7\frac{1}{6}$

34 $5\frac{1}{4}$ = ... *(as an improper fraction)*

A) $\frac{5}{4}$ B) $\frac{7}{4}$ C) $\frac{9}{4}$ D) $\frac{21}{4}$

35 $\frac{18}{5}$ = ... *(as a mixed number)*

A) $3\frac{3}{5}$ B) $2\frac{4}{5}$ C) $3\frac{2}{5}$ D) $1\frac{3}{5}$

36 *Which of the following is a proper fraction?*

A) $10\frac{1}{5}$ B) $\frac{9}{7}$ C) $\frac{5}{6}$ D) $\frac{3}{2}$

37 *Which of the following is an improper fraction?*

A) $\frac{5}{2}$ B) $\frac{1}{5}$ C) $\frac{2}{3}$ D) $5\frac{1}{2}$

2) Complete:

1. $\frac{12}{20} = \frac{......}{5}$
2. $5\frac{5}{6} + 2\frac{1}{6}$ = ...
3. $1 + 1\frac{1}{6}$ = ...
4. $\frac{5}{8} = \frac{......}{16}$
5. $5 - 2\frac{2}{5}$ = ...
6. $3 - 1\frac{1}{6}$ = ...
7. $1 - \frac{2}{5}$ = ...
8. $\frac{20}{36} = \frac{......}{9}$
9. $\frac{2}{3} = \frac{......}{12}$
10. $\frac{3}{5} = \frac{......}{10}$
11. *The proper fraction has the numerator .... than the denominator.*
12. $\frac{7}{2}$ *is an .... fraction.*
13. $\frac{3}{5}$ *is a .... fraction.*
14. $3\frac{2}{5} - 1\frac{4}{5}$ = ...
15. $3\frac{3}{4}$ = ... *(as an improper fraction)*

16 $\frac{17}{3}$ = ... *(as a mixed number)*

17 $4\frac{1}{5}$ = ... *(as an improper fraction)*

18 $\frac{3}{4} \times \frac{2}{2}$ = ...

19 $2\frac{6}{9} - 1\frac{2}{9}$ = ...

20 $\frac{5}{10} - \frac{2}{10}$ = ...

21 $\frac{4}{7} \times$ .... $= \frac{16}{28}$

22 $\frac{2}{5} = \frac{\dots\dots}{25}$

23 $\frac{5}{8} \times \frac{\dots\dots}{3} = \frac{15}{24}$

24 $2 - \frac{1}{3} - \frac{1}{3}$ = ...

25 $4\frac{2}{5} + 3\frac{3}{5}$ = ...

26 $4\frac{4}{7} - 2\frac{2}{7}$ = ...

27 $\frac{\dots\dots}{7} = 1$

28 $\frac{\dots\dots}{3} = 5$

29 $\frac{\dots\dots}{5} = 2$

30 $\frac{7}{7} = \frac{5}{\dots\dots}$

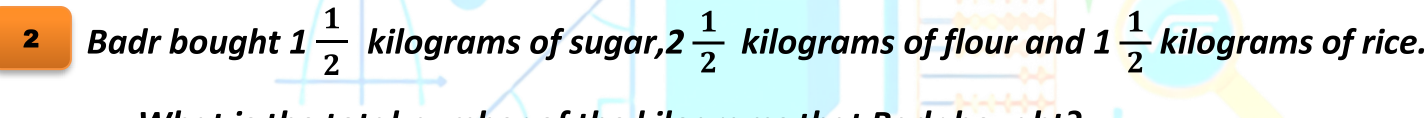
3) Answer the following questions:

1 *Hany drank $1\frac{3}{8}$ liters of water. Samir drank $1\frac{5}{8}$ liters of water.*

How many liters of water did Hany and Samir drink together?

....

....



2 *Badr bought $1\frac{1}{2}$ kilograms of sugar, $2\frac{1}{2}$ kilograms of flour and $1\frac{1}{2}$ kilograms of rice.*

What is the total number of the kilograms that Badr bought?

....

....

3 *Each of Otman and Ramzy has a bar of sweet of the same size. If Othman ate $\frac{4}{6}$ of this bar and Ramzy ate $\frac{4}{8}$ of this bar. Who ate more?*

....

....

4 *Amir has 12 cakes, he ate $\frac{1}{4}$ of them. How many cakes did Amir ate?*

....

....

5 *Nabil has 9 has cakes $\frac{2}{3}$ of them have chocolate. How many chocolate cakes are there?*

....

....

6 *Manar is making a drink that requires $\frac{5}{8}$ liter of milk, and has only $\frac{2}{8}$ liter of milk.*

How much milk does Manar need more to make the drink?

....

....

7 *Samira cut a cake into 8 equal parts and ate one part of them.*

What is the fraction that represents the remaining parts?

....

....

8 *Ayman finished $\frac{2}{7}$ of the homework before his coming back home.*

What fraction represents the remaining part of the homework?

....

....

9 *Hala spends $\frac{1}{10}$ from her pocket money to buy a toy.*

What fraction represents the remaining money of her money?

....

....

10 *A piece of wood of length $\frac{12}{15}$ meter. Another piece of wood of length $\frac{9}{15}$ meter.*

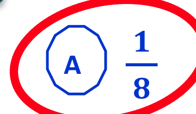
What is the length of two pieces of wood together?

....

....

1) Choose the correct answer:

1 *Which of the following is a unit fraction?*



A) $\frac{1}{8}$ B) $\frac{3}{8}$ C) $\frac{8}{8}$ D) $\frac{8}{1}$

2 *Which is correct decomposition of $\frac{5}{9}$ using unit fractions?*

A) $\frac{1}{9}+\frac{1}{9}+\frac{1}{9}+\frac{2}{9}=\frac{5}{9}$

C) $\frac{3}{9}+\frac{2}{9}=\frac{5}{9}$

B) $\frac{1}{9}+\frac{4}{9}=\frac{5}{9}$

D) $\frac{1}{9}+\frac{1}{9}+\frac{1}{9}+\frac{1}{9}+\frac{1}{9}=\frac{5}{9}$

3 *Which equation is not a correct decomposition of $\frac{10}{11}$*

A) $\frac{1}{11}+\frac{2}{11}+\frac{3}{11}+\frac{4}{11}=\frac{10}{11}$

C) $\frac{5}{11}+\frac{5}{11}=\frac{10}{11}$

B) $\frac{1}{11}+\frac{2}{11}+\frac{8}{11}=\frac{10}{11}$

D) $\frac{1}{11}+\frac{2}{11}+\frac{2}{11}+\frac{2}{11}+\frac{3}{11}=\frac{10}{11}$

4 $\frac{3}{9}+\frac{6}{9}=$ ....

A) $\frac{3}{9}$ B) $\frac{9}{18}$ C) 1 D) $\frac{6}{9}$

5 *Which of the following is an improper fraction?*

A) $2\frac{1}{5}$ B) $\frac{5}{7}$ C) $\frac{1}{4}$ D) $\frac{3}{2}$

6 *Which of the following is a mixed number?*

A) $\frac{3}{2}$ B) $\frac{51}{5}$ C) $\frac{2}{3}$ D) $5\frac{1}{2}$

7 $4\frac{1}{2}$ = ... (as an improper fraction)

A $\frac{5}{2}$ B $\frac{7}{2}$ C $\frac{9}{2}$ D $\frac{9}{4}$

8 $\frac{20}{7}$ = ... (as a mixed number)

A $3\frac{1}{7}$ B $2\frac{6}{7}$ C $2\frac{1}{7}$ D $1\frac{6}{7}$

9 $\frac{38}{6}$ = ... (as a mixed number)

A $6\frac{2}{6}$ B $2\frac{5}{6}$ C $2\frac{1}{6}$ D $5\frac{3}{6}$

10 Which of the following mixed numbers is equal to $\frac{6}{5}$?

A $1\frac{1}{2}$ B $1\frac{1}{12}$ C $1\frac{1}{5}$ D $1\frac{1}{6}$

11 $\frac{3}{4} + \frac{1}{4}$ = ...

A $\frac{1}{4}$ B $\frac{9}{18}$ C 1 D $\frac{20}{81}$

12 $4 + \frac{7}{11} + 2 + \frac{1}{11}$ = ...

A $6\frac{8}{11}$ B $6\frac{8}{22}$ C $2\frac{6}{11}$ D $7\frac{8}{11}$

13 $1\frac{1}{4} + \frac{3}{4}$ = ...

A $2\frac{1}{4}$ B 2 C 4 D $2\frac{3}{4}$

14 $2\frac{1}{5} + 1\frac{2}{5}$ = ...

(A) $3\frac{3}{5}$ (B) $2\frac{2}{5}$ (C) $4\frac{4}{5}$ (D) 4

15 $1 - \frac{3}{5}$ = ...

(A) $1\frac{3}{5}$ (B) $\frac{2}{5}$ (C) $\frac{3}{5}$ (D) $1\frac{2}{5}$

16 $3 - 2\frac{1}{4}$ = ...

(A) $1\frac{3}{4}$ (B) $2\frac{3}{4}$ (C) $\frac{3}{4}$ (D) $5\frac{1}{4}$

17 $5\frac{5}{9} - 2\frac{1}{9}$ = ...

(A) $3\frac{4}{0}$ (B) $3\frac{4}{9}$ (C) $7\frac{4}{9}$ (D) $7\frac{6}{9}$

18 *Which of the following fractions is the least?*

(A) $\frac{1}{5}$ (B) $\frac{2}{5}$ (C) $\frac{3}{5}$ (D) $\frac{4}{5}$

19 $\frac{1}{4} < \frac{1}{\text{.........}}$

(A) 8 (B) 7 (C) 5 (D) 3

20 *Which relation is correct?*

(A) $\frac{7}{12} > \frac{7}{9}$ (B) $\frac{7}{8} < \frac{7}{10}$ (C) $\frac{7}{13} < \frac{7}{11}$ (D) $\frac{7}{15} > \frac{7}{9}$

21 *Which relation is correct?*

(A) $\frac{3}{7} > \frac{5}{7}$ (B) $\frac{6}{7} < \frac{4}{7}$ (C) $\frac{1}{7} > \frac{3}{7}$ (D) $\frac{1}{7} < \frac{5}{7}$

22 $\frac{7}{12}$ *is closer to the benchmark fraction ....*

A) 1 B) $\frac{1}{2}$ C) $\frac{1}{4}$ D) 0

23 *Which of the following fractions is greater than 1?*

A) $\frac{4}{5}$ B) $\frac{5}{8}$ C) $\frac{7}{5}$ D) $\frac{9}{10}$

24 *Which number fits in the blank?* $\frac{2}{3} = \frac{18}{\dots\dots}$

A) 6 B) 9 C) 19 D) 27

25 *What is the missing numerator?* $\frac{25}{35} = \frac{\dots\dots}{7}$

A) 3 B) 5 C) 10 D) 15

26 *What fraction is not equivalent to* $\frac{3}{9}$ *?*

A) $\frac{6}{12}$ B) $\frac{5}{15}$ C) $\frac{2}{6}$ D) $\frac{1}{3}$

27 $\frac{2}{7} \times 3 = \dots\dots\dots\dots$

A) $\frac{5}{7}$ B) $\frac{6}{7}$ C) $\frac{5}{21}$ D) $\frac{6}{21}$

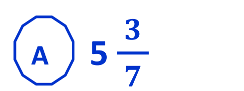
28 $\frac{14}{3} = \dots\dots\dots\dots$ *(as a mixed number)*

A) $4\frac{1}{3}$ B) $3\frac{2}{4}$ C) $4\frac{2}{3}$ D) $2\frac{2}{3}$

29 $2\frac{3}{7} = \dots\dots\dots\dots$ *(as an improper fraction)*

A) $\frac{17}{3}$ B) $\frac{17}{7}$ C) $\frac{14}{7}$ D) $\frac{11}{7}$

30 $2\frac{3}{7} + 3\frac{4}{7} = ...$



- A $5\frac{3}{7}$
- B $2\frac{2}{7}$
- C $4\frac{4}{7}$
- **D** 6

31 $2 - 1\frac{3}{5} = ...$

- A $1\frac{3}{5}$
- **B** $\frac{2}{5}$
- C $\frac{3}{5}$
- D $1\frac{2}{5}$

32 $2 + 1\frac{3}{5} = ...$

- **A** $3\frac{3}{5}$
- B $2\frac{3}{5}$
- C $\frac{3}{5}$
- D $5\frac{1}{5}$

33 $5\frac{1}{6} - 2\frac{5}{6} = ...$

- A $1\frac{4}{6}$
- **B** $2\frac{2}{6}$
- C $7\frac{5}{6}$
- D $7\frac{1}{6}$

34 $5\frac{1}{4} = ...$ *(as an improper fraction)*

- A $\frac{5}{4}$
- B $\frac{7}{4}$
- C $\frac{9}{4}$
- **D** $\frac{21}{4}$

35 $\frac{18}{5} = ...$ *(as a mixed number)*

- **A** $3\frac{3}{5}$
- B $2\frac{4}{5}$
- C $3\frac{2}{5}$
- D $1\frac{3}{5}$

36 *Which of the following is a proper fraction?*

- A $10\frac{1}{5}$
- B $\frac{9}{7}$
- **C** $\frac{5}{6}$
- D $\frac{3}{2}$

37 *Which of the following is an improper fraction?*

- **A** $\frac{5}{2}$
- B $\frac{1}{5}$
- C $\frac{2}{3}$
- D $5\frac{1}{2}$

2) Complete:

1. $\frac{12}{20} = \frac{3}{5}$
2. $5\frac{5}{6} + 2\frac{1}{6} = 7\frac{6}{6} = 8$
3. $1 + 1\frac{1}{6} = 2\frac{2}{6}$
4. $\frac{5}{8} = \frac{10}{16}$
5. $5 - 2\frac{2}{5} = 2\frac{3}{5}$
6. $3 - 1\frac{1}{6} = 1\frac{5}{6}$
7. $1 - \frac{2}{5} = \frac{3}{5}$
8. $\frac{20}{36} = \frac{5}{9}$
9. $\frac{2}{3} = \frac{8}{12}$
10. $\frac{3}{5} = \frac{6}{10}$
11. The proper fraction has the numerator Less than the denominator.
12. $\frac{7}{2}$ is an Improper fraction.
13. $\frac{3}{5}$ is a Proper fraction.
14. $3\frac{2}{5} - 1\frac{4}{5} = 1\frac{3}{5}$
15. $3\frac{3}{4} = \frac{15}{4}$ (as an improper fraction)

16 $\frac{17}{3} = 5\frac{2}{3}$ *(as a mixed number)*

17 $4\frac{1}{5} = \frac{21}{5}$ *(as an improper fraction)*

18 $\frac{3}{4} \times \frac{2}{2} = \frac{6}{8}$

19 $2\frac{6}{9} - 1\frac{2}{9} = 1\frac{3}{9}$

20 $\frac{5}{10} - \frac{2}{10} = \frac{3}{10}$

21 $\frac{4}{7} \times \frac{4}{4} = \frac{16}{28}$

22 $\frac{2}{5} = \frac{10}{25}$

23 $\frac{5}{8} \times \frac{3}{3} = \frac{15}{24}$

24 $2 - \frac{1}{3} - \frac{1}{3} = 1\frac{1}{3}$

25 $4\frac{2}{5} + 3\frac{3}{5} = 7\frac{5}{5} = 8$

26 $4\frac{4}{7} - 2\frac{2}{7} = 2\frac{2}{7}$

27 $\frac{7}{7} = 1$

28 $\frac{15}{3} = 5$

29 $\frac{10}{5} = 2$

30 $\frac{7}{7} = \frac{5}{5}$

3) Answer the following questions:

1 *Hany drank $1\frac{3}{8}$ liters of water. Samir drank $1\frac{5}{8}$ liters of water.*

How many liters of water did Hany and Samir drink together?



2 *Badr bought $1\frac{1}{2}$ kilograms of sugar,$2\frac{1}{2}$ kilograms of flour and $1\frac{1}{2}$ kilograms of rice.*

What is the total number of the kilograms that Badr bought?

$1\frac{1}{2} + 2\frac{1}{2} + 1\frac{1}{2} = 4\frac{3}{2} = 5\frac{1}{2}$ kg

3 *Each of Otman and Ramzy has a bar of sweet of the same size. If Othman ate $\frac{4}{6}$ of this bar and Ramzy ate $\frac{4}{8}$ of this bar. Who ate more?*

Othman Ramzy Othman ate more

$\frac{4}{6} > \frac{4}{8}$

4 *Amir has 12 cakes, he ate $\frac{1}{4}$ of them. How many cakes did Amir ate?*

$12 \times \frac{1}{4} = \frac{12}{4} = 3$ Cakes

5 *Nabil has 9 has cakes $\frac{2}{3}$ of them have chocolate. How many chocolate cakes are there?*

$9 \times \frac{2}{3} = \frac{18}{3} = 6$ Chocolate Cakes

6 *Manar is making a drink that requires $\frac{5}{8}$ liter of milk, and has only $\frac{2}{8}$ liter of milk.*

How much milk does Manar need more to make the drink?

$\frac{5}{8} - \frac{2}{8} = \frac{3}{8}$ Liter

7 *Samira cut a cake into 8 equal parts and ate one part of them.*

What is the fraction that represents the remaining parts?

$\frac{8}{8}$ ~~1~~ $- \frac{1}{8} = \frac{7}{8}$

8 *Ayman finished $\frac{2}{7}$ of the homework before his coming back home.*

What fraction represents the remaining part of the homework?

$\frac{7}{7}$ ~~1~~ $- \frac{2}{7} = \frac{5}{7}$

9 *Hala spends $\frac{1}{10}$ from her pocket money to buy a toy.*

What fraction represents the remaining money of her money?

$\frac{10}{10}$ ~~1~~ $- \frac{1}{10} = \frac{9}{10}$

10 *A piece of wood of length $\frac{12}{15}$ meter. Another piece of wood of length $\frac{9}{15}$ meter.*

What is the length of two pieces of wood together?

$\frac{12}{15} + \frac{9}{15} = \frac{21}{15} = 1\frac{6}{15}$ m